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ABSTRACT

This publication contains lesson plans and classroom activities to assist K-12 teachers develop sex equity themes. It supplements the "Sex Equity Resource Directory" (SO 013 579) which is a guide to sex equity resources available through the District of Columbia Public Schools. The "Ideabook" has several major sections each containing materials suitable for duplication. Section one contains awareness activities for use with colleagues, parents, and community members. "Title IX's Believe It or Not" posters, brief quizzes, and information sheets are included. Section two on social studies/history contains brief biographies of famous American women and games to play with the information. Section three on mathematics provides background information on why girls need mathematics and three sets of exercises--a "Discussion About Families" (elementary); activities on percentage and calculations (intermediate); and exercises on graph reading and interpretation (secondary). The fourth section on science contains lists of women Nobel Prize winners and members of the National Academy of Science for use in class discussions or as resources for student research. The next section contains teacher developed lesson plans in a broad range of subjects for grades K-9. Section six contains a play written by a junior high school student to dispel outmoded myths about girls and boys. (Author/RM)

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SEX EQUITY IDEABOOK
FOR THE
DISTRICT OF COLUMBIA PUBLIC SCHOOLS

Developed by

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July 1980

Educational Equity Institute
The American University
Washington, D.C.
20016

SO 013 580

PREFACE

Educational sex equity is a serious need in the lives of our students. Without it, children's aspirations, and, therefore, their entire lives may be limited unnecessarily by the sex stereotypes that prevent them from developing their full potential. Teachers, counselors, librarians and administrators can be a powerful influence in breaking through sex stereotypes by employing sex-fair resources and techniques in the work they do with students.

This Ideabook provides a sampling of lesson plans and classroom activities which can assist you to develop sex equity themes in your work with students. Also included are activities which may help you increase your own awareness, and the awareness of your colleagues, on educational sex equity issues.

The Ideabook is a direct-use resource and is a companion to the Institute's other publication: Sex Equity Resource Directory for District of Columbia Public Schools. The Directory is a guide to sex equity resources which are now available in the school system and in the Washington, D.C. Metropolitan area.

The publication of the Ideabook and the Directory is the final component of the Educational Equity Institute's work with the District of Columbia Public Schools.

Background

During 1979-80 the Educational Equity Institute of the American University was funded by the U.S. Office of Education as a Title IV Sex Desegregation Training Institute to work with educators in the District of Columbia Public Schools with the goal of increasing educational sex equity in District schools. With the cooperation and support of the Superintendent of Schools and the District Equal Employment Opportunity (EEO) staff, 21 target schools (approximately one junior high school and two elementary schools in each region) were identified. From these target schools, members of the faculty self-selected themselves for participation in Institute training activities during the school year.

Training Workshops. Six, five-hour workshops were conducted during the year. A seventh workshop was led by Institute trainees for their colleagues in their own school building. The training workshops provided information and materials to assist educators to increase sex equity in their educational activities with students. Workshop topics included:

- Requirements and responsibilities under Title IX of the Education Amendments of 1972.
- Becoming aware of the forms of sex bias, particularly sex stereotyping.

- Statistical information on the work lives of women and men and research information on the development of sex roles.
- Becoming a sex equity change agent: techniques for developing and implementing sex equity lesson plans and techniques for providing assistance to others through personal interaction, through workshops and through resources.

Mini-Collections of Educational Sex Equity Materials. Collections of approximately 40 print and non-print sex equity materials have been placed in each of the targeted, elementary and junior high schools for use by those who attended Institute workshops as well as by other educators wanting to introduce sex-fair concepts to their students. The Mini-Collections include information/professional development materials for teachers, counselors and librarians as well as curricular materials, career information and awareness activities for students.

Core Collections of Educational Sex Equity Materials. Two Core Collections have been placed by the Institute in central offices of the District of Columbia Public Schools to facilitate circulation of sex equity materials within the system. Each Core Collection consists of a Mini-Collection in addition to other materials selected and provided by the Institute. One Core Collection is maintained by the Title IX Coordinator in the Superintendent's EEO Office and a second Core Collection, by the Supervising Director, Department of Library Science. The Title IX Office Core Collection contains several print items with audiotapes as well as a number of filmstrips and two films which may be circulated for use throughout the system.

Sex Equity Resource Directory for the District of Columbia Public Schools. This Directory identifies sex equity resources available within the school system and through community groups and individuals. It contains annotations on all materials in the Mini- and Core Collections, and information on the content and use of other sex equity resources available within the school system. Information is also provided on local and national organizations and on individuals who are willing to serve as resources to District of Columbia educators as they work with students.

Sex Equity Ideabook for the District of Columbia Public Schools. This Ideabook is a collection of materials developed by the Educational Equity Institute staff and participants during the 1979-1980 school year. It contains resources for pre-service and in-service sex equity awareness training of educators and original materials that can be adapted for student use in history, social studies, mathematics and science at all levels, K through 12. The final section consists of sex-fair lesson plans developed and implemented by District of Columbia Public School educators in the course of their Educational Equity Institute training.

Acknowledgements

The Educational Equity Institute has had a very successful year in its work with the District of Columbia Public Schools. Many people have contributed to that success. We want to thank Dr. Vincent Reed, Superintendent of Schools; Ms. Wanda Hinshaw, Title IX Coordinator; and Mr. Emanuel Carr, EEO Officer, for their support and encouragement all year. We recognize, with appreciation, the assistance we have received from our Department of Education Project Officer, Ms. Mary Davis, and thank her for the guidance she has provided. We are also grateful to Ms. Donna Churchwell, our Grants Officer, for her on-going willingness to answer questions in a helpful manner.

Most particularly we want to thank our participants, the teachers, counselors and librarians of the targeted schools. The enthusiastic written and verbal response to our workshops suggest that they learned and benefitted from the training we offered. We know that we learned and benefitted from having worked with them.

We hope that this Ideabook, as well as the Resource Directory and the Mini-Collections and Core Collections of sex equity materials we have placed in the District of Columbia Public Schools will assist District of Columbia educators in their implementation of educational sex equity for the ultimate beneficiaries--District of Columbia school children.

Mary Ellen Verheyden-Hilliard
Director
July, 1980

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INTRODUCTION

ASK YOURSELF THESE QUESTIONS...

WHAT IS EDUCATIONAL EQUITY?

Educational equity means that all students have a right to equal educational opportunities, programs and resources without discriminatory treatment because of stereotyped factors such as their race, sex, economic class, national origin, disability or age.

WHY DO WE NEED SEX EQUITY?

Our society and our world are rapidly changing. Today about 90% of the females in America work in the paid labor force at some time during their lives. Single-parent families are increasing. Women are living longer than men, spending many years alone, without financial support. The world of the future will show even more changes. Both women and men want and need to be able to support their families adequately and to have some caring, human time as well. Our old stereotypes about males and females no longer apply and in the future they will apply even less. If we're to do a good job as educators, we need to prepare our students for the world they will be facing as they grow up and raise their own families.

IS SEX EQUITY DIFFERENT FROM SEX EDUCATION?

Sex equity is completely different from sex education. Sex education addresses human sexuality and reproduction. The word "sex" in that sense is not what sex equity is about. Sex equity is about fairness--it is really gender equity. It does not mean that females and males should all be the same, but simply means that students should have equal opportunity and educational services according to their own abilities and interests, not because they are a boy or a girl. Today, we cannot have a double standard in our schools, one for girls and one for boys. This is no more acceptable than having different standards for different races or ethnic groups.

WHAT IS TITLE IX?

Title IX is the major piece of Federal legislation (Public Law 92-318) which prohibits discrimination based on a person's sex in education programs and activities in any institution receiving Federal financial assistance. That means all public school systems in the United States! Title IX says that it is AGAINST THE LAW to provide different educational opportunities (or penalties) to boys and girls. It applies to areas such as dress codes, access to courses, training programs or use of school facilities, athletic opportunities, admissions, recruitment, counseling, financial assistance, and marital status. Examples of violations of the intent of Title IX are:

- *asking only boys to run projectors or carry heavy things*
- *asking only girls to clean up, make refreshments or take notes*
- *having a girls' line and a boys' line for recess or spelling bees*
- *counseling only girls into cosmetology or language arts and only boys into science or auto mechanics*
- *providing different extracurricular activities based only on sex e.g. soccer for boys, crafts for girls*
- *paying for the boys' team bus from school funds, the girls' team bus through bake sales*
- *expecting girls to be quiet while allowing "boys to be boys"*

WHAT CAN EDUCATORS DO TO MAKE A DIFFERENCE?

Title IX is a law. However, as with other laws, the spirit, the meaning of the law must be carried out if the law is to have a significant impact. What is most important is that we become aware of the seriousness of sex equity and begin to create sex-fair educational environments in our schools so that our students will be better able to make the best personal and career choices which will give each of them dignity and independence...for the rest of their lives.

HOW TO USE THIS IDEABOOK

The Sex Equity Ideabook for the District of Columbia Public Schools was developed as a companion volume to the Sex Equity Resource Directory. Both are being distributed to every public school in the District of Columbia.

It is not intended to be a comprehensive volume but, rather, one which can be of direct use to you. It is designed to supplement the resource information in the Directory with sample materials suitable for immediate classroom use in grades K-12.

All of the materials, except for one mathematics article, contained in the Ideabook were developed in the District of Columbia for the District of Columbia Public Schools staff and students. The items included are actual copies of materials developed and used successfully in the District schools. The activities all demonstrate how sex-fair lessons and materials can be incorporated into daily teaching or counseling without adding unduly to the educators' already overcrowded workload.

We hope that this will give you some ideas and will whet your appetite enough that you will explore some more of the materials contained in the Sex Equity Core and Mini-Collections now located throughout the school system. (See Directory for listing of locations).

The Ideabook has several major sections, each containing materials suitable for immediate duplication for school use:

AWARENESS ACTIVITIES	A variety of activities primarily for use with colleagues, parents and community members. Includes "Title IX's Believe-It Or-Not" posters and brief quizzes and information sheets.
SOCIAL STUDIES/HISTORY	Brief biographies of famous American women and games to play with the information. Also includes "We Can All Be" a career exploration poster idea.
MATHEMATICS	After some background information on why girls need mathematics too, this section contains three major sets of exercises; an elementary level "Discussion About Families," an intermediate level section on percentage caluculations, and a secondary level exercise on graph reading and interpretation. Each unit may be used alone or integrated into existing curriculum. They are equally suited for use in social studies curricula.

SCIENCE	Lists of women Nobel prize winners and members of the National Academy of Science, for use in class discussions or as resources for student research.
LESSON PLANS	All developed by teachers, librarians and counselors working in elementary and junior high schools in the District of Columbia, these plans encompass a broad range of subjects primarily for grades K-9.
STUDENT PLAY	This play, "A Basketball for Antessa" was written by a student at Hart Junior High School and shared at the Educational Equity Institute training workshops by one of her teachers. It is an excellent example of a student effort to dispel outmoded myths about girls and boys.

The "See Also..." materials noted at the end of most sections refer to items available to all educators in the District of Columbia Public Schools. The final section of this Ideabook lists the locations and phone numbers of the Sex Equity Resource Core and Mini- Collections as well as individual resource persons at each location for you to contact. See the Sex Equity Resource Directory for complete annotations of all materials.

AWARENESS ACTIVITIES AND BACKGROUND INFORMATION ON SEX EQUITY

Sex equity awareness is a first step toward achieving educational sex equity. This section provides sample background and direct-use techniques to develop awareness for yourself and with colleagues, parents and students. Each item included deals with a specific area of awareness. Educators can select items and choose the order of their presentation best suited to the needs of each particular group. The section concludes with a listing of other excellent, and more comprehensive, awareness/background resources which may be obtained from the Sex Equity Resource Mini- and Core Collections.*

- To test your awareness, try the quizzes and activities yourself.
- To increase your understanding and review your knowledge of sex equity concepts and materials, refer to some of the suggested resources.
- Then try these techniques with colleagues or students.

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* For information on how to use or borrow materials see the companion volume, Sex Equity Resource Directory for the D.C. Public Schools. A list of the locations of the Resource Collections in each region is at the end of this Ideabook.

TITLE IX's Believe It or Not!

AN AWARENESS ACTIVITY

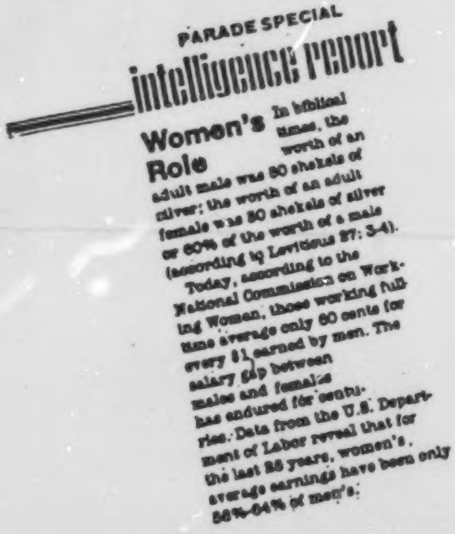
The following poster (reduced from original 11 x 17 size) is a sample of the type of awareness poster which can easily be developed utilizing newspaper or magazine articles and cartoons. It can be discussed and/or posted in either teachers' lounges or classrooms.

The second poster, blank except for the title, is intended to foster involvement of other colleagues and students. The name of the particular school (or class) may be inserted on the top line, e.g. Patterson Elementary's Title IX Believe It or Not! People in the school should be encouraged to find articles, cartoons or other tidbits pertaining to sex (in)equity and to tape their findings onto the blank poster until a collage is created.

--Jill Moss Greenberg
Educational Equity Institute
1980

BEST COPY AVAILABLE

Title IX's Believe It or Not!



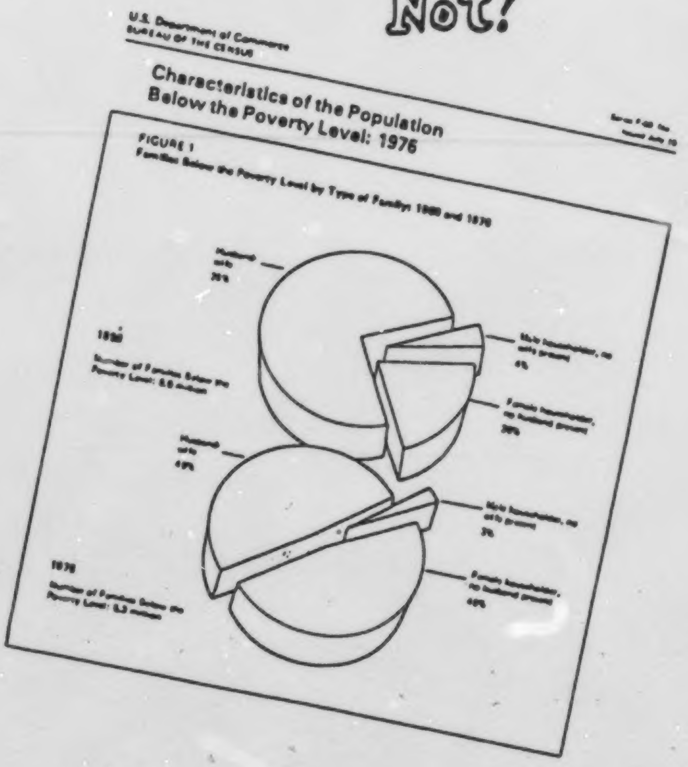
PARADE SPECIAL

intelligence report

Women's Role

In biblical times, the worth of an adult male was 50 shekels of silver; the worth of an adult female was 30 shekels of silver or 60% of the worth of a male (according to Leviticus 27: 3-4).

Today, according to the National Commission on Working Women, those working full time average only 60 cents for every $1 earned by men. The salary gap between males and females has endured for centuries. Data from the U.S. Department of Labor reveal that for the last 25 years, women's average earnings have been only 56%-64% of men's.



U.S. Department of Commerce
BUREAU OF THE CENSUS

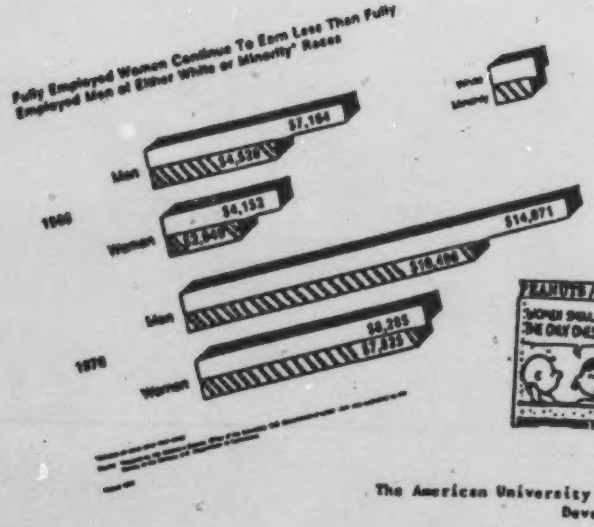
Characteristics of the Population Below the Poverty Level: 1976

FIGURE 1
Families Below the Poverty Level by Type of Family: 1959 and 1976

* Between the ages of 18 and 64, the majority of American women are in the paid workforce:

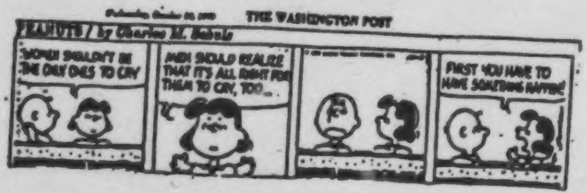
50.7% of Hispanic women
61.5% of Black women
58.3% of white women

* Women are 67% of the teachers in America and less than 1 percent of the superintendents of schools.



Fully Employed Women Continue To Earn Less Than Fully Employed Men of Either White or Minority Races

* The stereotypic American family; father working outside the home full-time, mother fulltime homemaker, and two children, is true for 7% of today's families.



THE WASHINGTON POST

PEANUTS / by Charles M. Schulz
WOMEN SHOULDN'T BE THE ONLY ONES TO CRY
MEN SHOULD REALIZE THAT IT'S ALL RIGHT FOR THEM TO CRY, TOO...
FIRST YOU HAVE TO HAVE SOMETHING HAPPEN!

The American University Educational Equity Institute
Developed by Jill Moss Greenberg

Title IX Believe It or Not!

TITLE IX QUIZ

	True	False
1. If a school has a dress code, the code must be the same for males and females (eg. length of hair requirements may not be different).	____	____
2. Labelling play areas in classrooms "for girls" and "for boys," with dolls and tea sets in the girls' area and trucks and blocks in the boys' area would be a violation of Title IX.	____	____
3. All counseling materials must be reviewed to see if they permit or require that students be treated differently on the basis of sex.	____	____
4. If a survey of your school textbooks reveals blatant sex bias, the school is required to begin a program to correct the bias or change the textbooks.	____	____
5. In the classroom a teacher gives some allowance to boys who use vulgar language because "boys will be boys." Girls who use vulgar language are reprimanded because society "does not approve" girls' use of such language. The teacher is in violation of Title IX.	____	____
6. In planning a class picnic at a nearby park, a teacher assigns all female students to bring food and to be responsible for washing utensils. All the boys are asked to bring charcoal and be responsible for collecting the trash. The teacher is in violation of Title IX.	____	____
7. In the classroom, the math teacher continually jokes about "illogical" females and what will happen if women become engineers and try to build bridges. The teacher is only joking and doesn't mean to be taken seriously. This is differential treatment and inappropriate under Title IX.	____	____
8. Where special schools have been established for pregnant students, the schools are required to provide comparable courses to those that would be offered to the student if she were in the regular school building.	____	____
9. In the past, only boys were trained in audiovisual operations and maintenance courses. The course is now open to girls but no girls apply. The school is required to take affirmative steps to encourage female participation.	____	____

Adapted from: "Title IX Quiz"
Verheyden and Associates, Washington, D.C.
By: Educational Equity Institute
Washington, D.C.

True False

10. Mike, a junior high school student, tells his counselor he wants to take home economics as an elective during the following year. The counselor feels boys are wasting their time in home ec. "There are so many other courses that would be a help to you in the future, why are you bothering with home ec? When you get married your wife will take care of all the cooking and sewing for you." This type of counseling is a violation of Title IX. ____ ____

11. Children are lined up, one line for girls and one line for boys to go to recess and for class trips because it makes it easier to keep track of the children and keep them under control. This is permitted under Title IX. ____ ____

12. While pregnant girls cannot be forbidden to take physical education classes, they can be required to bring notes from their physicians stating that they are in good enough health to participate. ____ ____

13. Under Title IX, elementary schools are required to have integrated girls and boys in physical education classes. However, in junior high, because there is more of a difference in size between boys and girls, the classes can be held separately. ____ ____

14. Girls want to take weightlifting as an elective physical education course, but are told by their principal that weightlifting is open only to boys. The principal is violating Title IX. ____ ____

15. The girls go to their counselor seeking support. Their counselor tells them that no girl in her right mind would participate in such an activity. The counselor is in violation of Title IX. ____ ____

16. The girls go to the Title IX coordinator, who is in charge of grievance procedures, to make a formal complaint and are refused because the Title IX coordinator says the girls are doing it as a joke. The Title IX coordinator is in violation of the law. ____ ____

17. The girls file a complaint directly with the Regional Office for Civil Rights. Their complaint will be refused because they have not made formal complaint through the school system. ____ ____

18. The girls and their parents go to court without bothering with the grievance procedure or the Office for Civil Rights. The court will refuse to hear the case because the girls have not exhausted the other channels first. ____ ____

TITLE IX QUIZ

		True	False
1.	If a school has a dress code, the code must be the same for males and females (eg. length of hair requirements may not be different).	T	
2.	Labelling play areas in classrooms "for girls" and "for boys," with dolls and tea sets in the girls' area and trucks and blocks in the boys' area would be a violation of Title IX.	T	
3.	All counseling materials must be reviewed to see if they permit or require that students be treated differently on the basis of sex.	T	
4.	If a survey of your school textbooks reveals blatant sex bias, the school is required to begin a program to correct the bias or change the textbooks.		F
5.	In the classroom a teacher gives some allowance to boys who use vulgar language because "boys will be boys." Girls who use vulgar language are reprimanded because society "does not approve" girls' use of such language. The teacher is in violation of Title IX.	T	
6.	In planning a class picnic at a nearby park, a teacher assigns all female students to bring food and to be responsible for washing utensils. All the boys are asked to bring charcoal and be responsible for collecting the trash. The teacher is in violation of Title IX.	T	
7.	In the classroom, the math teacher continually jokes about "illogical" females and what will happen if women become engineers and try to build bridges. The teacher is only joking and doesn't mean to be taken seriously. This is differential treatment and inappropriate under Title IX.	T	
8.	Where special schools have been established for pregnant students, the schools are required to provide comparable courses to those that would be offered to the student if she were in the regular school building.	T	
9.	In the past, only boys were trained in audiovisual operations and maintenance courses. The course is now open to girls but no girls apply. The school is required to take affirmative steps to encourage female participation.	T	

Adapted from: "Title IX Quiz"
Verheyden and Associates, Washington, D.C.
By: Educational Equity Institute, Washington, D.C.

		True	False
10.	Mike, a junior high school student, tells his counselor he wants to take home economics as an elective during the following year. The counselor feels boys are wasting their time in home ec. "There are so many other courses that would be a help to you in the future, why are you bothering with home ec? When you get married your wife will take care of all the cooking and sewing for you." This type of counseling is a violation of Title IX.	T	
11.	Children are lined up, one line for girls and one line for boys to go to recess and for class trips because it makes it easier to keep track of the children and keep them under control. This is permitted under Title IX.		F
12.	While pregnant girls cannot be forbidden to take physical education classes, they can be required to bring notes from their physicians stating that they are in good enough health to participate.		F
13.	Under Title IX, elementary schools are required to have integrated girls and boys in physical education classes. However, in junior high, because there is more of a difference in size between boys and girls, the classes can be held separately.		F
14.	Girls want to take weightlifting as an elective physical education course, but are told by their principal that weightlifting is open only to boys. The principal is violating Title IX.	T	
15.	The girls go to their counselor seeking support. Their counselor tells them that no girl in her right mind would participate in such an activity. The counselor is in violation of Title IX.	T	
16.	The girls go to the Title IX coordinator, who is in charge of grievance procedures, to make a formal complaint and are refused because the Title IX coordinator says the girls are doing it as a joke. The Title IX coordinator is in violation of the law.	T	
17.	The girls file a complaint directly with the Regional Office for Civil Rights. Their complaint will be refused because they have not made formal complaint through the school system.		F
18.	The girls and their parents go to court without bothering with the grievance procedure or the Office for Civil Rights. The court will refuse to hear the case because the girls have not exhausted the other channels first.		F

SUMMARY OF THE FORMS OF BIAS IN INSTRUCTION

The
Bias
Book

These forms of bias described in instructional materials demonstrate the bias also found in the instruction itself.

1. *Exclusion/Invisibility*:

Perhaps the most fundamental form of bias in instructional materials is the complete or relative exclusion of a particular group or groups from representation or consideration in text and/or illustrations.

Research suggests, for example, that textbooks published prior to the 1960s largely omitted any consideration of Black Americans within contemporary society, and indeed rendered Black people relatively invisible from accounts or references to America after the Reconstruction. Spanish-speaking Americans, Asian Americans, and Native Americans continue to be absent from most textbooks, both in terms of their historical roles and contributions to our society and with reference to their current status or position. Many studies indicate that women, who constitute over 51 percent of the U.S. population, represent approximately 30 percent of the persons or characters referred to throughout textbooks in most subject areas. The disabled are rarely seen in regular school curricula or materials. All of these are examples of the existence of bias through exclusion or invisibility.

2. *Stereotyping*:

When they are included in textbooks, racial-ethnic minority group members and both males and females are often portrayed with regard to only one particular attribute, characteristic, or role.
most frequently seen in textbooks include:

- the portrayal of Asian Americans only as laundry men or cooks;
- the portrayal of Mexican Americans only as peons or migrant workers;
- the portrayal of Native Americans as either "bloodthirsty savages" or "noble sons of the earth";
- the portrayal of older persons as either "senile" and "incompetent," "dirty old men," or "little old ladies in tennis shoes."
- the portrayal of women primarily as mothers (and only occasionally as nurses, secretaries, or teachers) and as passive, dependent persons defined solely in terms of their home and family roles;
- the portrayal of men in a wide variety of occupational roles (and only occasionally as husbands and fathers) and as strong, assertive persons defined primarily in terms of their occupational roles;
- the portrayal of all people in wheelchairs as being dependent and passive.

from Implementing Title IX and Attaining Sex Equity: A Workshop Package for Elementary-Secondary Educators, Shirley McCune and Martha Matthews, Co-editors. Office of Education, U.S. Dept. of HEW. Adapted by Jill Moss Greenberg. Educational Equity Institute.

In textbooks published before the 1960s, the stereotyping of Black Americans as "Uncle Remus" or "plantation mammy" characters was frequently documented.

Stereotyping may occur in reference to any of a number of variables: physical appearance, intellectual attributes, personality characteristics, career roles, domestic roles, and social placement (with regard to access to roles of personal, social, or institutional power or dominance).

3. *Imbalance/Selectivity*

Textbooks perpetuate bias by presenting only one interpretation of an issue, situation, or group of people. This imbalanced account restricts the knowledge of students regarding the varied perspectives which may apply to a particular situation. Through selective presentation of materials, instructional materials may distort reality and ignore complex and differing viewpoints. As a result, millions of students have been taught little or nothing about the contributions, struggles, and participation of women and minorities in our society.

Examples of these distortions include:

- focusing on the disabilities of the handicapped and excluding their many and varied abilities
- the origins of European settlers in the New World are emphasized, while the origins and heritage of African Americans are frequently omitted.
- the history of Native American-Federal relations is frequently described in terms of treaties and protection, rather than with reference to broken treaties and progressive government appropriation of Native American lands.
- references to Chinese immigrants emphasize them as "cheap labor" which necessitated the passage of restrictive immigration laws and threatened the living standards of other Americans, without any mention of the contributions of the Chinese, and the many forms of discrimination and harassment they experienced.
- textbooks refer to the fact that "women were given the vote" but omit the physical abuse and sacrifices suffered by the leaders of the suffrage movement.

4. *Unreality*

Many researchers have remarked upon the tendency of instructional materials to ignore facts which are unpleasant or which do not conform with the stated value system of the white majority culture. Instructional materials often ignore the existence of prejudice, racism, discrimination, exploitation, oppression, sexism, and intergroup conflict. Controversial topics are glossed over. This unrealistic coverage denies children the information they need to recognize, understand, and perhaps some day conquer, the problems that plague society.

Examples of unreality may be found in materials including discussions of the improvement of the opportunities for minority groups, including the elderly, without indicating the problems which are still faced by large numbers of minority group persons or the portrayal of women only in home roles despite the fact that a majority of adult women work outside the home.

5. *Fragmentation/Isolation*:

Bias through fragmentation and isolation takes two primary forms. First, content regarding minority groups and women may be physically or visually fragmented and isolated and delivered only in separate chapters (e.g., "Black Americans and the Winning of the West," "Bootleggers, Suffragettes and Other Diversions") or even in boxes to the side of the page (e.g., "Ten Women Achievers in Science"). Second, racial-ethnic minority group members and women may be depicted as interacting only with persons like themselves, never contacting or impacting the dominant culture.

Fragmentation and isolation imply that the history, experiences, and situations of minority and female persons are somehow entirely unrelated to those of the dominant culture or cultures (usually white, Anglo-Saxon, Protestant and male). They ignore the dynamic relationship of these groups to the development of our current society, and imply the continuous progress of the dominant culture without any reliance upon the contributions and influence of racial-ethnic minorities and women. This form of bias was classically demonstrated by the placement of special education classes in school basements, separate wings or different buildings.

6. *Linguistic Bias*:

Language is a powerful conveyer of bias in instructional materials. Use of the generic "he" is an obvious source of bias, but there are also many more subtle forms of linguistic bias. For example:

- Native Americans are frequently referred to as "roaming," "wandering," or "roving" across the land. These terms might be used to apply to buffalo or wolves; they suggest a merely physical relationship to the land, rather than a social or purposeful relation. Such language implicitly justifies the seizure of Native lands by more goal-directed white Americans who "traveled" or "settled" their way westward.

- Immigrant groups are often referred to as "hordes" or "swarms." These terms serve to dehumanize, and to reduce the diversity and variation within any group of people.

- Such words as "forefathers," "brotherhood," and "manmade" serve to deny the contributions and existence of the 51 percent of the U.S. population which is female.

WOMEN IN THE WORKFORCE UPDATE

Circle the answer nearest that which you believe to be correct:

1. Between the ages of 18 and 64 what percentage of ALL American women are in the paid workforce?

   10 20 30 40 50 60 70 80 90 100

   ____ percentage of Black women in the paid workforce
   ____ percentage of Hispanic women in the paid workforce
   ____ percentage of white women in the paid workforce

2. The paid worklife expectancy of American men is how many years?

   10 20 30 40 50 60 70 80 90 100

3. The paid worklife expectancy of American women who are single, divorced, separated or widowed is how many years?

   10 20 30 40 50 60 70 80 90 100

4. The typical 25-year-old American woman of today will work for pay for ________ years. She will also be married and have ________child/children.

5. At the most, the paid worklife expectancy difference between American women and men is ___________years.

6. In 1976 the percentage of American families headed by men householders, no wife present and living in poverty was:

   10 20 30 40 50 60 70 80 90 100

7. In 1959 the percentage of American families headed by women householders, no husbands present and living in poverty was:

   10 20 30 40 50 60 70 80 90 100

8. In 1976 the percentage of American families headed by women householders, no husbands present and living in poverty was:

   10 20 30 40 50 60 70 80 90 100

9. ____________ percent of all Black families are headed by women.
   ____________ percent of all Black families living in poverty are headed by women.
   ____________ percent of all Hispanic American families are headed by women.
   ____________ percent of all Hispanic American families living in poverty are headed by women
   ____________ percent of all white families are headed by women
   ____________ percent of all white families living in poverty are headed by women.

10. For every dollar earned by men, women who work year-round at full time paid jobs earn:

    10 20 30 40 50 60 70 80 90 100

11. Women are _________percent of the teachers in America and __________percent of the superintendents of schools.

12. Of the 15.5 million people of all ages living alone in America, women are what percent?

    10 20 30 40 50 60 70 80 90 100

13. Of the 4.4 million aged Americans living in poverty, what percentage are women?

10 20 30 40 50 60 70 80 90 100

14. The stereotypic picture of the American family is father working full time outside the home, the mother at home as full time homemaker taking care of two children. The actual percentage of American families that conform to this stereotype is less than:

10 20 30 40 50 60 70 80 90 100 percent

1,	U.S. Department of Labor, Bureau of Labor Statistics, 1978.
2,3,4,5	Special Labor Force Report 187, U.S. Department of Labor, Bureau of Labor Statistics.
6,7,8	Current Population Reports, U.S. Department of Commerce, Bureau of the Census Series P-60, No. 115, July 1978.
9	U.S. Department of Commerce, Bureau of the Census Series P-60, No. 119, March 1978.
10	Median Earnings of Year-Round, Full-Time Workers, U.S. Department of Commerce, Bureau of the Census.
11	Department of Health, Education and Welfare, National Center for Educational Statistics, Digest of Educational Statistics, 1974.
12	Statistical Abstract of the United States, 1979.
13	White House, Office of Sarah Weddington, October, 1979.
14	Employment in Perspective: Working Women, U.S. Department of Labor, Bureau of Labor Statistics, Report 531, April 1978.

From: "Women in the Workforce Update"
Verheyden & Associates
Washington, D.C.
Adapted by: Educational Equity Institute
Washington, D.C.

WOMEN IN THE WORKFORCE UPDATE

Answer Sheet

Circle the answer nearest that which you believe to be correct:

1. Between the ages of 18 and 64 what percentage of ALL American women are in the paid workforce?

60%
10 20 30 40 50 60 70 80 90 100

61.5 percentage of Black women in the paid workforce
50.7 percentage of Hispanic women in the paid workforce
58.[illegible] percentage of white women in the paid workforce

2. The paid worklife expectancy of American men is how many years?

41%
10 20 30 40 50 60 70 80 90 100

3. The paid worklife expectancy of American women who are single, divorced, separated or widowed is how many years?

41%
10 20 30 40 50 60 70 80 90 100

4. The typical 25-year-old American woman of today will work for pay for 34 years. She will also be married and have 2 child/children.

5. At the most, the paid worklife expectancy difference between American women and men is 7 years.

6. In 1976 the percentage of American families headed by men householders, no wife present and living in poverty was:

3% 10 20 30 40 50 60 70 80 90 100

7. In 1959 the percentage of American families headed by women householders, no husbands present and living in poverty was:

20%
10 20 30 40 50 60 70 80 90 100

8. In 1976 the percentage of American families headed by women householders, no husbands present and living in poverty was:

48%
10 20 30 40 50 60 70 80 90 100

9. 39 percent of all Black families are headed by women.
70 percent of all Black families living in poverty are headed by women.
20 percent of all Hispanic American families are headed by women.
50 percent of all Hispanic American families living in poverty are headed by women
12 percent of all white families are headed by women
40 percent of all white families living in poverty are headed by women.

10. For every dollar earned by men, women who work year-round at full time paid jobs earn:

$.59
10 20 30 40 50 60 70 80 90 100

11. Women are 67 percent of the teachers in America and LESS THAN ONE percent of the superintendents of schools.

12. Of the 15.5 million people of all ages living alone in America, women are what percent?

66%
10 20 30 40 50 60 70 80 90 100

13. Of the 4.4 million aged Americans living in poverty, what percentage are women?

72%

10 20 30 40 50 60 70 80 90 100

14. The stereotypic picture of the American family is father working full time outside the home, the mother at home as full time homemaker taking care of two children. The actual percentage of American families that conform to this stereotype is less than:

7% 10 20 30 40 50 60 70 80 90 100 percent

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1,	U.S. Department of Labor, Bureau of Labor Statistics, 1978.
2,3,4,5	Special Labor Force Report 187, U.S. Department of Labor, Bureau of Labor Statistics.
6,7,8	Current Population Reports, U.S. Department of Commerce, Bureau of the Census Series P-60, No. 115, July 1978.
9	U.S. Department of Commerce, Bureau of the Census Series P-60, No. 119, March 1978.
10	Median Earnings of Year-Round, Full-Time Workers, U.S. Department of Commerce, Bureau of the Census.
11	Department of Health, Education and Welfare, National Center for Educational Statistics, Digest of Educational Statistics, 1974.
12	Statistical Abstract of the United States, 1979.
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Adapted from: "Women in the Workforce Update"
Verheyden & Associates
Washington, D.C.

Sex Equity Environmental Impact Statement*

AN AWARENESS ACTIVITY

This brief survey offers a creative alternative to standard checklists and to other materials available to help teachers assess the general educational sex equity climate within their classrooms.

It lightheartedly applies the "Environmental Impact Statement" concept to sex equity, enabling educators to obtain a quick check of the level of equity they provide and encourages them to improve their ratings.

*NOTE: After duplicating the Environmental Impact Statement for workshop or school use, a gold legal seal can be affixed to the lower left side to create more visual attractiveness and "legal" authenticity.

--Jill Moss Greenberg
Educational Equity Institute
1980

SEX EQUITY ENVIRONMENTAL IMPACT STATEMENT

AREA OF CONCERN: Sex Equity in the School Environment

IMPACT ON ENVIRONMENT:

Score: 2 points for each area of full compliance
1 point for each area of partial compliance
0 points for each area of non-compliance

POINTS

A. DISTRIBUTION OF NATURAL RESOURCES:
Expectations for girls and boys are equal. Talents, skills and interests of all individuals are tapped equitably. ______

B. TRAFFIC PATTERNS:
All procedures and patterns including seating, lines, activity areas and academic and athletic groupings are integrated, sex-fair and race-fair. ______

C. NOISE CONTROL:
Girls and boys are talked to in the same manner and terms and are held to the same standards. ______

D. AIR QUALITY:
The "air is cleared" the same way for all students. Discipline and penalties are equal. Acceptable behavior, language and dress are non-discriminatory. ______

E. MATERIALS:
All instructional materials are non-biased regarding sex, race, age and handicap and reflect the diverse abilities, activities and options of these groups. ______

F. BALANCE OF ELEMENTS:
No imbalance or selectivity exists in opportunities for boys and girls to perform classroom tasks, i.e., running audiovisual equipment, washing utensils. ______

G. LANDSCAPE:
Bulletin boards, illustrations and other visual materials show females and males of varied racial, ethnic, age and handicapped groups in a variety of roles. ______

POINTS

H. LINGUISTIC POLLUTION:
Verbal and non-verbal language and cues avoid stereotyped generalizations and demonstrate non-biased models, e.g., firefighter, spouse, humanity. ______

I. ACCESS:
Students are given equal access to resources, facilities and placement, e.g., courses, extra curricular activities. ______

J. POLLUTION CONTROL EFFORTS:
Affirmative action is regularly undertaken to compensate for (filter out) the effects of past discrimination in particular areas, e.g., lack of experience/exposure to mechanical or nurturing skills. ______

ENVIRONMENTAL RATING

0 - 10 Points:	Serious Polluter - may require Federal lawsuit
10 - 15 Points:	Moderate offender - Keep improving! Submit new Environmental Impact Statement in 60 days.
16 - 20 Points:	Conservationist - Pass Environmental Quality Control. Receive Equity Commendation.

NAME ______________________________

SCHOOL ______________________________

DATE ______________________________

Developed by Jill
Moss Greenberg

FOR OTHER AWARENESS ACTIVITIES/BACKGROUND INFORMATION . . .

See also . . .

A. Resource Mini-Collection

- *Beyond Sugar and Spice*
- *Venture Beyond Stereotypes*
- *Today's Changing Roles*
- *Overcoming Math Anxiety*
- *The Whole Person Book*
- *Growing Up Equal*
- *Tredyffrin/Easttown: Revising the Curriculum*

B. Resource Core Collection

- *Sexism in School and Society*
- *Undoing Sex Stereotypes*
- *And Jill Came Tumbling After: Sexism in American Education*
- *Cracking the Glass Slipper: PEER's Guide to Ending Sex Bias in Your School*

Films: *Changing Images*

Fable of He and She

OVERVIEW

FAMOUS AMERICAN WOMEN

Traditional studies of history are all-too-often one-sided, portraying men (usually white) as the only politicians, entrepreneurs, school administrators, inventors, scholars, activists, lawyers, pioneers and labor leaders. The eleven women presented here were selected not so much as unique individuals or as history's most significant women, but as representatives of the kind of talent, intelligence and courage which women throughout history have possessed and have displayed when given the opportunity. They are presented here for two major purposes:

1. So that when a young woman expresses a desire to aspire beyond the usual stereotypes and sets her mind to achieve her goal, she will know that, rather than being an oddity, she is following a course which is natural for a creative, intelligent human being to pursue.

2. So that both male and female students can develop a more realistic perception of the history and capabilities of American women.

These biographies have been written in the hope that they will be used in a variety of learning situations. With some imagination, most lend themselves to dramatization in which the particular circumstances of women during various phases of history can be highlighted. With study questions added, they can be used as reading assignments in English, language arts or social studies.

The Who Am I? activity at the end of the series is provided as a basis for measuring comprehension and recall. The History Password Game (based on the television quiz game Password Plus) is more demanding, requiring students to synthesize a number of key aspects of each woman's life in order to arrive at her identity. Designed to be played by a whole class, such a game stimulates general classroom participation as well as student cooperation.

Do feel free to integrate these biographies and those of other people not usually dealt with in standardized texts, into your classroom teaching. With students who are old enough, be clear about what you are doing and why it is important. This will provide students with another level of awareness about the need to obtain complete and accurate information from a variety of sources.

The Bibliography which follows the biographies cites sources which are not as widely known or used by teachers. These sources are rich in information about women's role in our history.

Walteen Grady
Educational Equity Institute, 1980

SYLVIA DUBOIS (1768 - 1884?)

SYLVIA'S PARENTS WERE HELD AS SLAVES. EACH ONE WAS THE "PROPERTY" OF A DIFFERENT OWNER. SYLVIA WORKED FOR A SMALL FARMER IN PENNSYLVANIA. BECAUSE SHE WAS LARGE AND POWERFUL (SHE WEIGHED OVER 200 POUNDS AND STOOD FIVE FEET TEN INCHES TALL) SHE DID WORK THAT MOST PEOPLE AT THAT TIME CONSIDERED MEN'S WORK. ONCE SHE WAS ABLE TO STOP A FIGHT BY USING HER STRENGTH AGAINST ANYONE WHO TRIED TO START FIGHTING AGAIN.

SYLVIA'S FATHER WAS A VETERAN OF THE AMERICAN REVOLUTION. HE SERVED AS A FIFER AND TOOK PART IN THE BATTLE OF PRINCETON. NOWHERE DO THE RECORDS KEPT AT THAT TIME SAY THAT HE GOT HIS FREEDOM IN RETURN FOR FIGHTING. HIS SERVICE DID NOT HELP FREE HIS WIFE AND DAUGHTER EITHER. SYLVIA'S MOTHER TRIED TO BUY HER OWN FREEDOM BUT COULD NOT MAKE ENOUGH MONEY DOING EXTRA WORK. SHE COULD NOT KEEP HER YOUNG DAUGHTER FROM BEING SOLD AWAY FROM HER FAMILY EITHER.

SYLVIA HATED THE WIFE OF HER "OWNER." THE WOMAN HAD TREATED HER CRUELLY. ONE DAY WHEN THE WOMAN'S HUSBAND WAS AWAY ON JURY DUTY, THE WOMAN MADE HER SO MAD THAT SYLVIA HIT HER. WHEN THE WOMAN'S HUSBAND CAME HOME, HE TOLD SYLVIA THAT IF SHE WOULD TAKE HER CHILD AND GO TO NEW JERSEY, HE WOULD GIVE HER AND THEIR CHILD FREEDOM.

TO GET TO NEW JERSEY SYLVIA HAD TO GO THROUGH DEEP, FORESTS

AND CROSS ROUGH RIVER WATERS. ALONG THE WAY A WHITE MAN STOPPED HER DEMANDING TO SEE HER PASS.* SHE SAID NO AND WOULD NOT TELL HIM WHO SHE WAS. SHE SAID, "I'M NO MAN'S NIGGER . . . I BELONG TO GOD." HE STARTED TO COME NEAR HER, BUT WHEN SHE PUT HER BABY DOWN AND SHOWED HIM HER FIST, HE BACKED OFF. SHE CONTINUED HER JOURNEY. WHEN SHE FOUND HER MOTHER IN NEW BRUNSWICK, NEW JERSEY, SHE STAYED THERE TO WORK.

*SLAVES HAD TO CARRY PASSES WHEN THEY WERE TRAVELING WHICH SAID THAT THEIR OWNER KNEW THEY WERE AWAY AND GAVE THEM PERMISSION

FAMOUS AMERICAN WOMEN

MARIA STEWART (1803 - 1879)

MARIA STEWART WAS BORN IN HARTFORD, CONNECTICUT AND ORPHANED AT FIVE YEARS OF AGE. FOR A WHILE SHE LIVED IN BOSTON, MASSACHUSETTS. SHE MADE PUBLIC SPEECHES AT A TIME WHEN WOMEN AND BLACK SPEAKERS WERE ALMOST UNHEARD OF. IN HER TALKS SHE USED EXAMPLES FROM THE BIBLE AND URGED FREE BLACKS TO EDUCATE THEMSELVES TO GAIN THEIR RIGHTS. SHE SAW FREE BLACKS AS BEING NOT MUCH BETTER OFF THAN SLAVES BECAUSE FEW LAWS PROTECTED THEM AND FEW OCCUPATIONS WERE OPEN TO THEM.

SHE WAS ANGRY AT WHITE AMERICANS WHO HELPED PEOPLE IN OTHER COUNTRIES WHO WERE WORKING FOR THEIR FREEDOM (GREEKS, POLES, IRISH), BUT WHO WOULDN'T HELP HAITI (A BLACK COUNTRY) GAIN ITS FREEDOM OR WHO WOULDN'T HELP BLACKS IMPROVE THEIR WORKING AND LIVING CONDITIONS RIGHT HERE IN THE UNITED STATES.

SOME PEOPLE THOUGHT FORMER SLAVES SHOULD BE SENT BACK TO AFRICA TO START THEIR OWN COUNTRY. SHE WAS AGAINST THAT IDEA, SAYING THE MONEY USED TO BUILD THOSE SHIPS SHOULD BE USED TO BUILD SCHOOLS FOR BLACKS. SHE BELIEVED THAT "KNOWLEDGE IS POWER." SHE LEFT BOSTON WHERE SHE FELT SHE WAS NOT DOING ANY GOOD BECAUSE EVEN MANY BLACKS DID NOT LIKE HER FOR SPEAKING IN PUBLIC.

SHE MOVED TO NEW YORK AND TAUGHT PUBLIC SCHOOL THERE. THEN SHE MOVED TO BALTIMORE AND DID THE SAME. DURING THE CIVIL WAR, MARIA STEWART LIVED AND WORKED AT FREEDMAN'S HOSPITAL AS HEAD OF HOUSEKEEPING.

FAMOUS AMERICAN WOMEN

SARAH PARKER REMOND (1815 - 1883?)

Sarah Parker Remond was born in Salem, Massachusetts in 1815. Her grandfather on her mother's side had fought in the Revolutionary War for the American colonies' freedom from Britain. Her father was a free Black man from Curacao, an island in the Caribbean.

Sarah grew up in a town, Salem, where many people worked to end slavery. They were called Abolitionists. Many Abolitionists were friends of Sarah's family and stayed in their home.

Compared to many other cities, Salem was a town where life was better for Blacks, but Sarah's family could never forget that few of their race lived as well as they did. Working to end slavery was a way for them to feel that life would not always be a struggle for them and their fellow Blacks.

Along with her brother who was also an abolitionist, Sarah lectured for the American Anti-Slavery Society. In her travels in the United States, hotels often would not let her stay. She was afraid this would happen when she travelled to England. Instead, she was welcomed warmly and given a watch engraved by Englishwomen calling themselves "her sisters". In Ireland, where she spoke against slavery, many understood what she had to say since the Irish in the United States had suffered discrimination too.

Sarah Parker Remond (continued)

When the Civil War began, Sarah worked to get the British to support the Union.

After the War, Sarah and her brother joined Frederick Douglass and a group of whites to speak all over New York State for equal political rights for women and the black men.

Even though she was past middle-age, Sarah decided she wanted to study medicine. To do this she went to Florence, Italy where she gained a fine position as a physician. The records kept at that time do not give any more information about her later life or her death.

FAMOUS AMERICAN WOMEN

MOTHER (MARY HARRIS) JONES* (1830 - 1930)

Mother Jones was born in Cork, Ireland. She and her family came to America in 1835, and her father became a laborer on the railroads. Mother Jones went to elementary school and planned on becoming a teacher. She taught for a short time at a convent in Monroe, Michigan, then she moved to Chicago to begin a dressmaking business. She liked sewing better than, as she said it "....bossing little children."

Mother Jones married an iron worker in 1861 and had four children. tragedy hit her family in 1867 when a yellow fever epidemic swept through Memphis, where they lived. Her husband and all four babies died. Mother Jones then returned to Chicago and the dressmaking business.

After the Chicago fire of 1871, she became interested in the poor living and working conditions of workers. She joined the Knights of Labor, the major union of the time. Later she joined United Mine Workers Union. While many people of the time thought that getting women the right to vote or outlawing drinking was the main goal for women, she saw true economic and social equality as the most important step. Mother Jones used to say, "No matter what you fight, don't be ladylike."

---

*Mary Harris Jones was called "Mother Jones" by the men in the Union with whom she worked.

SARAH BREEDLOVE (MADAME C.J.) WALKER (1867 - 1919)

Sarah Breedlove was a pioneer Black businesswoman and millionaire. She was born in Louisiana, orphaned at six, married at fourteen, and widowed at twenty. She worked for 18 years in St. Louis supporting herself and her daughter working as a washerwoman.

According to Walker, she dreamed the formula for a preparation for straightening Black women's hair. After success in St. Louis, Walker moved to Denver showing her method by going door to door. She gained customers and agents while she concentrated on teaching her methods and manufacturing her products. After working a year and setting up a business and cosmetic manufacturing headquarters in Denver, Walker travelled, giving lecture-demonstrations in homes, clubs, churches. The success of these travels led her to establish a second office in Pittsburg.

She later transferred both offices to Indianapolis where she built a plant. She employed 3000 people. Some went from door to door demonstrating Walker's product in people's homes. She became known throughout the United States and the Caribbean.

Madame Walker contributed to the NAACP, homes for the aged and the YMCA. She gave scholarship money for women at Tuskegee Institute, a Black college in Alabama. She also contributed to the Palmer Institute, a private school for Blacks.

SARAH BREEDLOVE WALKER (CONTINUED)

SHE BECAME A MILLIONAIRE AND INVESTED HER MONEY IN REAL ESTATE. SHE MOVED TO NEW YORK AND BUILT A TOWNHOUSE AS WELL AS A COUNTRY HOME ON THE HUDSON RIVER IN NEW YORK STATE.

WALKER WAS ALWAYS ACTIVE. THOUGH SHE SUFFERED FROM HYPERTENSION, SHE WOULD NOT FOLLOW HER DOCTOR'S ORDERS. THIS LED TO HER DEATH IN 1919.

FAMOUS AMERICAN WOMEN

MAGGIE LENA WALKER (1867 - 1934)

Maggie Lena Walker was a Black woman who became an insurance and banking executive. She was born in Richmond, Virginia. Her mother was a cook and wash woman. Her father was a northern abolitionist author.

Maggie first became an insurance agent for a company called the Woman's Union. She took business courses in accounting and sales while teaching school.

As a member and then secretary/treasurer of a Black cooperative insurance agency, the United Order of St. Luke's, with headquarters in Richmond, Walker's vision, drive and ability to manage got the company out of its nearly bankrupt condition. Under her leadership, the membership doubled in the first year. She suggested that the insurance agency start a bank, which it did. She was made president. Under her leadership, this bank absorbed the other Black banks in Richmond to become the Consolidated Bank and Trust Company. Then Walker gave up the presidency to become head of the board of directors.

Like other financiers Walker wasn't always successful. One failure was a department store which folded in the early 1900's.

Walker was respected and loved in Richmond. Her feeling that she should help improve the life of her people, led her to raise thousands of dollars for a tuberculosis sanatarium, a community center and a visiting-nurse program.

FAMOUS AMERICAN WOMEN

JEANNETTE RANKIN (1880 - 1973)

JEANNETTE RANKIN WAS THE FIRST WOMAN TO BE ELECTED TO CONGRESS. A REPUBLICAN FROM MONTANA, ONE OF THE WESTERN STATES WHERE WOMEN HAD THE VOTE BEFORE THEY DID IN THE EAST, SHE SERVED IN THE HOUSE OF REPRESENTATIVES FROM 1917 TO 1919. SHE CONCERNED HERSELF PRIMARILY WITH THE PASSAGE OF THE NATIONAL WOMEN'S SUFFRAGE AMENDMENT. DURING HER CAMPAIGN, RANKIN ALSO SUPPORTED AN EIGHT-HOUR DAY FOR WOMEN WORKING OUTSIDE THE HOME, TAX LAW REFORM AND PROHIBITION.

RANKIN SERVED A SECOND TERM IN CONGRESS FROM 1941 TO 1943. SHE BELIEVED THE UNITED STATES SHOULD HAVE A STRONG NATIONAL DEFENSE, BUT SHE FELT THIS DEFENSE SHOULD BE OF OUR OWN SHORES, NOT OF OVERSEAS LANDS. AS THE ONLY MEMBER OF CONGRESS TO VOTE AGAINST THE UNITED STATES' PARTICIPATION IN BOTH WORLD WARS, RANKIN LOST A LOT OF SUPPORT. WITH SO MUCH PRESSURE AGAINST HER, RANKIN RESIGNED FROM NATIONAL POLITICS FOR A WHILE TO WORK FOR PEACE.

IN 1968, SHE LED SEVERAL THOUSAND WOMEN IN A PEACE MARCH IN WASHINGTON, D.C. TO PROTEST THE WAR IN VIETNAM. IN HER HONOR, THE GROUP WAS CALLED THE JEANNETTE RANKIN BRIGADE.

FRANCES JACKSON COPPIN (1837 - 1913)

EVEN THOUGH FRANCES JACKSON COPPIN WAS BORN A SLAVE, SHE ALWAYS KNEW THAT SHE WANTED TO GET AN EDUCATION. THIS WAS HARD FOR MOST BLACK WOMEN TO DO DURING THE 1800'S. PEOPLE WERE MADE TO BELIEVE THAT BLACKS AND WOMEN COULD NOT LEARN VERY MUCH. FRANCES KNEW THIS BELIEF WAS WRONG. SHE PROVED IT IN TWO WAYS.

FIRST, SHE WENT TO THE ONLY SCHOOL IN THE UNITED STATES THAT WOULD GIVE A WOMAN A COLLEGE EDUCATION: OBERLIN COLLEGE IN OHIO. SHE WAS THE SECOND BLACK WOMAN TO GRADUATE FROM OBERLIN.

SECOND, SHE TAUGHT OTHER BLACKS TO MASTER GREEK AND MATHEMATICS JUST AS SHE HAD DONE. HER STUDENTS LOVED HER BECAUSE SHE WAS SO PROUD WHEN THEY DID WELL.

THEY WERE PROUD WHEN SHE DID WELL, TOO.

SHE WORKED AS A TEACHER AND A PRINCIPAL IN PHILADELPHIA. SHE ALSO WORKED AS A MISSIONARY IN SOUTH AFRICA.

CHARLOTTE E. RAY (1850 - 1911)

Charlotte Ray was the first black female lawyer and the first woman admitted to the D.C. Bar. She was born in New York City. Her father was named Charles Ray. He was a newspaper editor and a minister. He helped slaves escape on the Underground Railroad.

Charlotte went to school at the Institution for the Education of Colored Youth - now part of the University of the District of Columbia. She taught at Howard University while beginning to study law there. She was especially good at understanding and explaining laws which involved corporations.

She graduated from the law school in 1872, and was admitted to the District of Columbia bar.

Even though she was a good lawyer, Charlotte Ray, because of prejudice, could not get enough clients. She had to give up her law practice. She went back to New York City to teach. She married sometime after 1886. She died of Bronchitis in 1911.

FAMOUS AMERICAN WOMEN

AMELIA EARHART (1898 - 1937)

Amelia Earhart captured the attention of the whole world in her brave long-distance flights. She was born into a poor family in 1898. She bought her first airplane when she was 25 with money she saved while working for the telephone company. In May, 1932, she became the first woman to complete a solo flight across the Atlantic Ocean. Four years before that she had been a crew member on a flight across the Atlantic Ocean.

Until her plane was lost when she tried to fly around the world, Amelia Earhart flew missions that many male pilots thought were impossible. She made the first solo flight from Honolulu to the American mainland. She was the first person to fly non-stop from Mexico City to Newark, New Jersey. Her career attracted many women to flying. Once airborne some women even grew to like parachute jumping.

LUCY DIGGS SLOWE (1885 - 1937)

LUCY DIGGS SLOWE WAS A TEACHER, SCHOOL ADMINISTRATOR AND COLLEGE DEAN. SHE WAS BORN IN BERRYVILLE, VIRGINIA. SHE WAS ONE OF THE FOUNDERS AND VICE PRESIDENT OF ALPHA KAPPA ALPHA, THE FIRST SORORITY AMONG BLACK COLLEGE WOMEN.

AFTER EARNING HER BACHELORS DEGREE FROM HOWARD UNIVERSITY, SLOWE TAUGHT ENGLISH IN HIGH SCHOOLS IN BALTIMORE AND THE DISTRICT OF COLUMBIA. SHE EARNED HER MASTERS DEGREE AT COLUMBIA UNIVERSITY. SHE WAS THE FIRST PRINCIPAL OF SHAW JUNIOR HIGH SCHOOL IN THE DISTRICT OF COLUMBIA.

SHE BECAME DEAN OF WOMEN AT HOWARD UNIVERSITY IN 1922. SHE HELPED ORGANIZE THE NATIONAL COUNCIL OF NEGRO WOMEN AND THE NATIONAL ASSOCIATION OF COLLEGE WOMEN, PATTERNED AFTER THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.

THROUGHOUT HER LIFE, SLOWE WAS ACTIVE IN POLITICS AND SPORTS. SHE WAS A MEMBER OF THE WOMEN'S INTERNATIONAL LEAGUE FOR PEACE AND FREEDOM. SHE WON SEVENTEEN CUPS IN TENNIS COMPETITION AND WAS ALSO AN ACCOMPLISHED SINGER.

FAMOUS AMERICAN WOMEN

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FAMOUS AMERICAN WOMEN IN HISTORY

WHO AM I?

1. I worked as an insurance agent, studied accounting and sales and later in my career, was president of a bank.

   ANSWER: ______________________________

2. I was one of the first women to speak in public about the need for free blacks to educate themselves and fight for our rights. Many blacks (as well as whites) spoke out in public.
   ANSWER: ______________________________

3. I made millions in developing a business based on black women's hair care. Often when I began, I went from door to door telling people about it. Before that, I had supported myself and my daughter by washing people's clothes.
   ANSWER: ___________________________________

4. I helped organize the National Council of Negro women. I was the first principal of Shaw Junior High. I won 17 cups for tennis competition.
   ANSWER: __________________________________

5. I was the first black woman lawyer and the first woman admitted to the District of Columbia Bar. Because of prejudice not enough people brought their legal problems to me. I had to become a teacher in order to get work.
   ANSWER: _________________________________

6. I was the first woman to be elected to Congress. I worked hard to get the 19th amendment passed which gave women the right to vote. I was the only member of Congress to vote against the United States fighting in both of the World Wars.
   ANSWER: ____________________

FAMOUS AMERICAN WOMEN IN HISTORY

WHO AM I?

7. I was a large woman who lived in slavery until I had a big fight with the woman who thought she "owned" me. Her husband told me he would release me from bondage if I left the area.
ANSWER: ______________________________

8. I made many brave long-distance flights before my plane disappeared while I was flying around the world. Because of my career many other women wanted to become pilots.
ANSWER: ______________________________

9. My family was friendly with abolitionists. I travelled around the northern United States and to England telling people how bad slavery was and why it should be stopped. I studied medicine after the slaves were freed.
ANSWER: ______________________________

10. I first worked as a teacher but I didn't like it. I became a dressmaker instead. After my family died of yellow fever, I worked to help workers get cleaner, warmer houses and working places. I thought better pay was more important than votes.
ANSWER: ______________________________

11. I learned how to speak classical Greek fluently. My students and I had a good relationship. We respected each other.
ANSWER: ______________________________

HISTORY PASSWORD GAME

1. Prepare the list of names to be guessed, clues to the names and several definitions (at least 4) to each clue in advance.

2. Tell students that this is a History Password game and list or name the women it covers. Let them know if they can use their notes while the game is being played.

3. Divide the class into two equal teams. Explain that teammates may help each other (within the time limit) by passing notes, but may not talk out of turn. If they do, the other team gets 5 points each time. (This is to keep things "fairly" quiet).

4. Students will be given clues to one of each of the correct five key facts given in turn for each woman whose name they are trying to guess. After each clue is given, students have 30 seconds to guess the key fact. If they guess incorrectly or cannot guess at all, give the other team another clue to the same key fact. Alternate in this manner twice. If students haven't guessed the key fact by then, give it to them. (No one gets the point). As they guess the correct key fact, the teacher writes that fact on the board. Their team gets a point and one chance to guess who the woman is. When they guess her name, the team gets five points.

5. Each clue should be given alternately to each team, and to each student in turn. Don't allow a few students to do all the guessing.
6. The winner is the team that gets the most points.

WOMEN IN AMERICAN HISTORY - PASSWORD CLUES

MAGGIE LENA WALKER

Insurance
President
Bank
Community
Business

MARIA STEWART

Bible
Speaker
Rights
Schools
Hospital

CHARLOTTE E. RAY

Law
Corporation
Bar
Prejudice
Teacher

SILVIA DuBOIS

Farm
Strong
Child
Stubborn
Free

SARAH BREEDLOVE

Hair
Millions
Travel
Beauty
Home

LUCY DIGGS SLOWE

Peace
Tennis
Principal
Sorority
English

JEANETTE RANKIN

Republican
Congress
Vote
Peace
War

AMELIA EARHART

Telephone
Solo
Atlantic
Flying
Parachute

WOMEN IN AMERICAN HISTORY - PASSWORD CLUES

SARAH PARKER REMOND

- Abolitionist
- Speaker
- Sister
- Travel
- Medicine

FRANCES JACKSON COPPIN

- Teacher
- College
- Math
- Missionary
- Greek

MARY HARRIS JONES

- Fever
- Mines
- Union
- Dressmaker
- Money

WE CAN ALL BE . . .

(Posters - Reduced from 11"x17")

WE CAN ALL BE is an example of the type of inclusive title, concept and illustration possible to promote unbiased career exploration. Appropriate for social studies or counseling use, the poster was created with pictures cut out of magazines and newspapers.

The pictures incorporate persons who, by their inclusion, combat multiple forms of bias often found in regular school materials: racism, sex-role stereotyping, and handicapism.

The second poster, blank except for the title, is suitable for distribution to students so that they might develop individual posters of what "WE CAN ALL BE . . ."

The posters may be used in varied ways:

- -as stimulants for class discussion
- -as part of existing social studies units
- -on bulletin boards or other displays
- -for career exploration and guidance
- -as a reinforcing activity prior to or following field trips

A sample lesson plan, using these posters, developed by a District of Columbia teacher, may be found on page

Jill Moss Greenberg
Educational Equity Institute
1979

we can all be . . .

WASHINGTON, D. C. MAYOR
MARION BARRY

U.S. CONGRESS
REP. SHIRLEY CHISHOLM

PORTUGAL - PRIME MINISTER
MARIA DE LOURDES PINTASSILGO

U.S. ASTRONAUT
NEIL ARMSTRONG

U.S. ASTRONAUT
ANNA FISHER

elected officials **athletes** **astronauts**

we can all be . . .

FOR OTHER SOCIAL STUDIES/HISTORY ACTIVITIES . . .

See also . . .

A. RESOURCE MINI-Collection

Social Studies/History:

- *Tredyffrin/Easttown: Revising the Curriculum*
- *Black Women in Nineteenth Century America*
- *They Led the Way*
- *Black Women in White America*
- Record: *What If I Am a Woman?*
- *Winning "Justice for All"*
- *Being a Man*
- *Women's History Week: Information Packet for Classroom Teachers*
- *Sexism and Racism: Feminist Perspectives*

B. RESOURCE CORE Collection

Social Studies/History:

- *The Quotable Woman*
- *A History of Women in America*
- *Approaches to Women's History: A Resource and Teaching Guide*
- *Women in Mathematics*
- *Sources of Strength: Women and Culture*
- *Hypatia's Sisters: Biographies of Women Scientists Past and Present*
- *Contributions of Women: Politics and Government*

OVERVIEW

SEXISM IN MATHEMATICS

Why Is Math Important?

Mathematics is an extremely important tool necessary for working and preparing to work in the higher paying career fields such as business, industrial technology and building trades, as well as all the engineering and science professions. Traditionally, only a few women have entered these careers, in part because they have been stereotyped as "masculine", and in part, because women have avoided training in mathematics. Girls seem interested in mathematics and achieve well in this discipline until around the seventh grade when many enroll in the less challenging mathematics courses and later choose to drop out of mathematics altogether. Thus mathematics becomes a "critical filter" for many young women limiting their future career options as early as junior high school.

What's The Real Story?

Recent research has confirmed that mathematical ability is not in any way sex-related. Girls' lack of confidence in mathematics usage and avoidance of the discipline have resulted from sex bias, that is, from society's differential treatment of girls and boys beginning at an early age. Often parents and teachers expect boys to like numbers and arithmetic. Boys more often than girls are encouraged to think independently, to make decisions and to solve problems through reasoning (this includes non-numerical as well as numerical problems). Furthermore, boys develop spatial skills needed in mathematics by participating in physical activities such as building with blocks and playing various ballgames. Girls, on the other hand, are usually encouraged to participate in quieter activities and many of them receive little experience in spatial orientation or in independent, problem-solving activities.

Young girls first entering school may already have feelings of inadequacy about the use of numbers as a result of existing parental and societal attitudes. Many teachers presently in the system have not received sex equity training and their attitudes may also reflect societal bias resulting in perpetuation of the myth that "boys do better in math." In addition, textbooks and other instructional materials may be biased.

What Can You Do About It?

This section of the handbook is designed to help overcome sex bias in mathematics and to help boys and girls understand that all people can enjoy and work in mathematics. Background reading materials are provided to help teachers and guidance counselors understand the problem of mathematics avoidance by girls. Other materials included describe strategies for correcting bias in existing mathematics curricula and texts. In addition, several problems are included for direct use in mathematics and/or social science classes at various levels, K through 9. The problems combine the learning of mathematical/statistical skills with learning about the status of men and women in our society.

Educational Equity Institute, 1980

Compliments of National Council
of Teachers of Mathematics.
Arithmetic Teacher, 27 (6),
February, 1980.

ONE POINT OF VIEW

Girls Need Mathematics, Too

By Dora Helen Skypek
Emory University

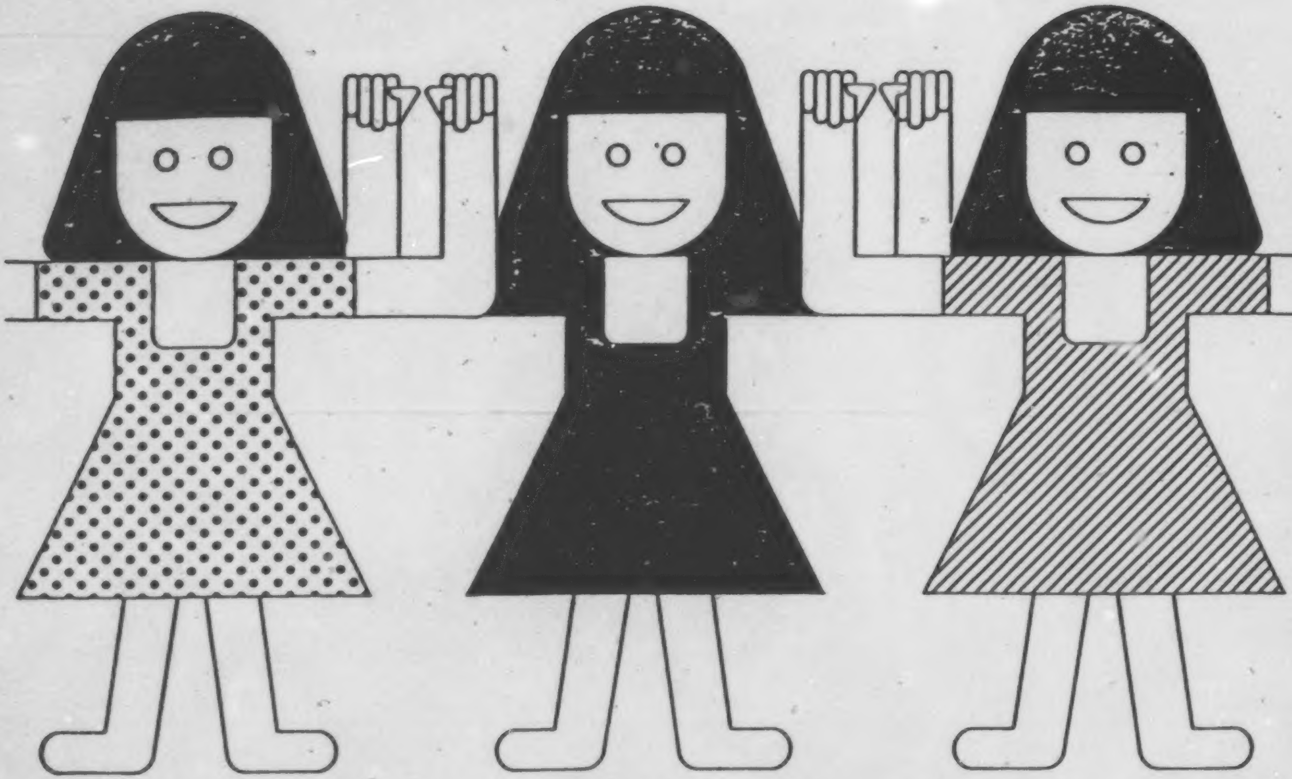
Sex-related inequities in mathematics education have been documented in many contexts. Less than one-third of the females among the freshman classes at our major universities have the prerequisites in high school mathematics to qualify for the range of undergraduate majors offered. The options for males are much wider. Two-thirds of them have completed the minimum number of high school mathematics courses (including trigonometry) prerequisite to admission to any program.

The unequal admissions and retention of women and men in graduate programs are frequently the result of the unequal backgrounds of women and men in undergraduate mathematics. There *is* discrimination—against the less well-prepared in mathematics.

The higher-paying, less crowded, and more prestigious occupations in business administration and in the technical and professional fields are dominated by males. These same fields are, for the most part, mathematics related. One of the barriers to women who aspire to enter or move upward in these fields is a lack of knowledge and skill in mathematics.

Until that time when high school girls enroll in and complete the rigorous sequence of mathematics courses in the same proportions as the boys, there will continue to exist an inequity for women in educational, vocational, and career options.

But what do these problems have to do with us in elementary and middle-school education? Contrary to the elective course policies of high school and colleges, all children in grades one through eight are *required* to take courses in mathematics. Contrary to the findings of sex-related differences in mathematics in the national surveys of high school students and young adults, there are no sex-related differ-



ences in the mathematics performance scores of elementary and middle-school children.

It is this writer's point of view that inequities in mathematics education occur at all levels of schooling. The decisions students make to enroll or not to enroll in courses in mathematics are heavily influenced by the interests, attitudes, and beliefs of the students. These interests and attitudes are not acquired full-blown upon promotion to grades eight or nine. Elementary school curricula and practices constitute a large segment of the society in which children learn sex roles and the discriminatory, differential expectations for females and males.

Textbooks and other teaching materials have long been guilty of conveying the message that mathematics is primarily for males. Nibbelink and Mangru (Jacobs 1978) have reported a study of sexism in mathematics textbooks for grades three to six, covering five time periods from the mid-1930s to the mid-1970s. In the books of the 1970s, they found the number of story problems in which female names were used was almost equal to the number in which male names were used—a much improved ratio over that in earlier texts. The more dramatic change over the four decades, however, was that the number of story problems had decreased by half and the number of problems about people had decreased even more. In fact, two-thirds of the problems in the mid-1930s were about people, whereas two-thirds of the problems in the books of the mid-1970s did not involve people at all. Nibbelink and Mangru also found, in the problems of the 1970s in which people were involved, that there were few instances in which females were assigned to traditional male roles (like driving a gravel truck) and males to traditional female roles (like baking a cherry pie).

The writer agrees with the position taken by the authors of the study: sexism still prevails in the assignments of the sexes to traditional roles, and the problem of sex-role stereotyping in word problems is not solved by removing references to people. What is needed is a conscious, deliberate decision by writers and publishers to assign randomly and in equal number female and male names to a wide assortment of roles. The result may be that both boys and girls will learn that mathematics is for everyone.

The usefulness of mathematics is another component of the belief system that separates girls from boys. More young boys than girls believe that mathematics is useful. It is the writer's conjecture that elementary school boys believe in the usefulness of mathematics because others around them believe mathematics is useful for boys and not because the boys comprehend that a high school course in trigonometry is prerequisite to taking a calculus course which, in turn, may or may not be useful to them in the vocational, career, or educational choices they will someday make. Girls, on the other hand, do not get the same support from others. Unless the "significant others" around them believe higher level mathematics will be useful to girls, they are more likely than boys to lose interest in mathematics and to opt out of courses not required by school policy.

Still another affective variable that discriminates between the sexes is confidence in one's ability to do mathematics. Sex differences are nonexistent in the earlier grades. In later years, however, girls frequently underestimate their abilities while boys overestimate theirs. Ability in mathematics somehow comes to be labeled a masculine trait and is expected of boys. Thus, when faced with difficulties in learning mathematics, boys just try harder, whereas girls find it permissible to believe they are not supposed to be smart in mathematics. A complex collection of experiences and learned beliefs, not genetic differences, erode the confidence of females in doing mathematics. The first eight years of schooling are crucial ones for many of our students in their acquiring an interest in mathematics and in learning self-confidence in doing mathematics.

Wise (1979), in summarizing the findings of Project TALENT's Women and Mathematics study, reports that "among students of equal ability and educational aspirations, 9th grade levels of interests in mathematics and math-related careers predicted how much high school math a student would take. *Virtually all of the sex differences in the number of mathematics courses taken in high school could be explained by differences in career interests already evident in the 9th grade.*"

The implications are stunning. Intervention programs at the high school level *may* help to motivate girls to stay with, or get back into, the linear-like sequence of mathematics courses that provide the greater options for further educational or career choices. The more significant implication, however, is that more must be done prior to the ninth grade. We must devote far greater attention than we now do to career information and the development of self-confidence and interest in mathematics, especially for girls.

The role of elementary and middle-school teachers in this task is critical. Teachers need more information about educational and occupational opportunities in our technological world. Teachers need a greater knowledge and understanding of the problems imposed on girls (and boys) by society's traditional sex-role expectations. Teachers need to monitor their own behaviors for discriminatory or anxiety-producing classroom practices. Research indicates that teachers do, in fact, treat the sexes differentially. Teachers should ask themselves questions such as these:

(1) Do my interactions with students reinforce sex role stereotypes? Do I classify behavior as "ladylike" or "just like a boy"? Do I reward or punish social behaviors of boys and girls differentially?

(2) Do I expect all my students, regardless of sex, to do well in mathematics and science, and in problem solving as well as in computation? Do I encourage and expect girls as well as boys to build things, to measure the length and angle of descent of the playground slide, to collect and classify pollution samples? Do I expect boys and girls to be equally successful in all academic tasks?

(3) Do I recognize the sometimes subtle, sometimes overt, messages in "the hidden curriculum" that mathematics and mathematics-related careers are for men only? Do I challenge school practices that discriminate unjustly—say, industrial or manual arts for boys only?

Teacher behavior, as with student behavior, is largely a function of the information, interests, attitudes and beliefs that they have learned. It is the writer's conviction that teachers of teachers have a major responsibility to act on the issues addressed here and to inform *their* students about the inequities in mathematics education.

Mathematics educators who teach preservice or inservice elementary and middle-school teachers should take note of the sources of mathematics anxiety detailed by Tobias (1978)—there are implications for both the teacher educator and the classroom teacher.

Sadker and Sadker (1978) have examined teacher education textbooks for sexism, including elementary mathematics methods books with copyright dates of 1973, 1974, and 1975. The Sadkers report that "not one of the math methods texts analyzed made any reference to sex differences in math achievement, to the many problems that may confront female students in this area, or to the very real stereotyping of math as a 'male' domain." This writer notes that textbooks with even later copyright dates also ignore the particular problems faced by the female half of the student populations.

Until there are methods books that deal with problems in the mathematics education of girls and women, teacher educators and staff development personnel might refer to the collection of addresses on women and mathematics presented at the 1978 NCTM annual meeting (Jacobs 1978). This collection of research summaries, descriptions of intervention programs, and suggestions for classroom and community use is recommended for anyone interested in the problems of sex-related inequities in mathematics education.

An important goal for the 1980s, *for all mathematics educators,* should be that both girls and boys become equally confident of success in mathematics; become equally persuaded that mathematics is for everyone; and become equally prepared for whatever options are available to them whenever they must make educational or vocational decisions.

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Jacobs, J. E., ed. *Perspectives on Women and Mathematics.* Columbus, Ohio: ERIC Clearinghouse for Science, Mathematics, and Environmental Education, 1978. (Available from NCTM.)

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BEST COPY AVAILABLE

WOMEN IN MATHEMATICS

GREECE 6th Century, B.C.	THEANO	Theano was a teacher in the school founded by the Pythagoreans.
EGYPT 4th Century	HYPATIA	Hypatia lectured on number theory and wrote several treatises on mathematics.
ITALY (1718 - 1799)	AGNESI	Maria Gaetano Agnesi published the influential Analytical Institutions on integral calculus.
FRANCE (1708 - 1749)	DE BRETEUIL	Emilie de Breteuil was a leading mathematical physicist and the Marquise du Chatelet.
FRANCE (1776 - 1831)	GERMAINE	Sophie Germaine won the grand prize of the French Academy of Sciences for elastic studies.
SCOTLAND (1780 - 1872)	SOMERVILLE	Mary Fairfax Somerville translated and expanded Laplace's work on motions of the solar system.
RUSSIA/EUROPE (1850 - 1891)	KOVALEVSKY	Sonya Corvin-Krukovsky Kovalevsky won Prix Bordin, French Academy of Sciences, for analysis.
GERMANY (1882 - 1935)	NOETHER	Emmy Noether was one of the most influential forces in the development of abstract algebra.
ENGLAND/U.S. (1858 - 1931)	SCOTT	Charlotte Angas Scott was mathematics professor and university department head at Bryn Mawr.
AUSTRIA/U.S. (1878 - 1968)	MEITNER	Lise Meitner, first woman to win Atomic Energy Commission's Fermi Award for atomic physics.
GERMANY/ENGLAND (- 1971)	NEUMANN	Hanna von Caemmerer Neumann was a prolific researcher in algebra.
	CONTEMPORARY (BORN IN THE 20TH CENTURY)	
ITALY	PASTORI	Maria Pastori worked in analysis and theory of relativity; Professor, University of Milan.
ITALY	CIBRARIO	Maria Cibrario held the Chair of Mathematical Analysis, University of Pavia.
FRANCE	LELONG-FERRAUD	Jacqueline Lelong-Ferraud was Professor of Mathematics, University of Paris.
FRANCE	LIBERMAN	Paulette Liberman did research in algebraic topology; Professor, University of Rennes.
RUSSIA/SWITZ.	PICARD	Sophie Picard occupied Chair of Higher Geometry and Probability Theory, University of Neuchatel.
GERMANY/U.S.	TODD	Olga Taussky Todd, Professor, California Institute of Technology, working in number theory.
U.S.	REES	Mina Rees, first president, American Association for Advancement of Science.
U.S.	ROBINSON	Julia Robinson is Mathematics Professor, University of California, Berkeley.

Compiled by Mary Jo Strauss from Women in Mathematics by Lynn Osen (the MIT Press, Cambridge, MA, 1974) and Hypatia's Sisters by Feminists Northwest, Seattle, WA, 1975.

(Reduced from 8½" x 14")

AN EXERCISE IN ELEMENTARY ARITHMETIC:

A DISCUSSION ABOUT FAMILIES

MATERIALS:

Two posters showing pictures of nine families and examples of questions below.

WHAT TO DO:

To stimulate discussion or attract interest in numbers while creating awareness of the variety of families:

--- The two posters might be displayed alongside selected questions in the library, counseling center or classroom.

--- The posters are numbered/lettered differently to allow separate or joint use.

--- The posters might be the basis for a discussion in the classroom for young children or for a counting exercise with written responses and/or discussions for older children.

EXAMPLES OF QUESTIONS:

1. Here are two sets of pictures of families. Answer the following questions.

   a. How many families are on each poster?

   b. How many families are there all together?

   c. How many parents are in each family?

   d. How many children are in each family?

   e. How many mothers?

   f. How many fathers?

   g. How many children?

   h. How many grandparents?

   i. How many grandchildren?

   j. How many babies?

   k. Which family is the largest?

   l. Which family is the smallest?

   m. How many two-person families are there?

n. How many three-person families?

o. How many four-person families?

2. Older children might be asked to fill in blanks or to prepare a table:

   a. Family a has _____ children.

   b. Family _____ is the largest.

   c. Families _____ and _____ have 3 generations.

   d. Families _____ and _____ are extended families.

   e. The total number of adults shown on Poster I is _____.

   f. The total number of children on Poster I is _____.

3. An example of a table is:

Number of	a	b	c	d	e	1	2	3	4	Totals
Adults										
Parents										
Children										
Grandparents										
Persons										

4. Discussion questions sample:

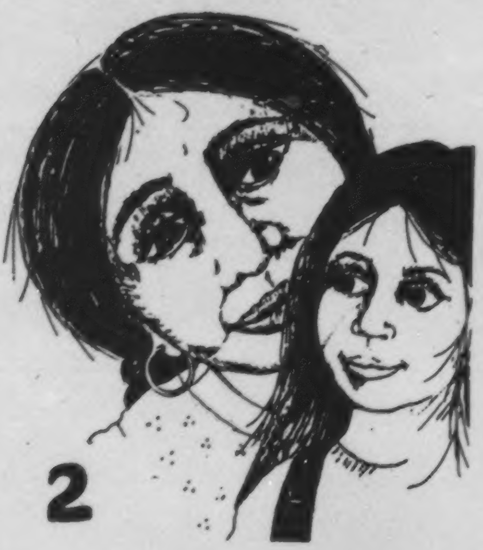
   a. How might life be different for families 2 and 3?

   b. How might life be different for families c and d?

families

FATHERS
CARE

1



2

3

4

families

a

b

c

d

e

An Overview of Women in the Workforce

**** Problems for Students and Teacher's Solution Sheets appear on subsequent pages ****

42%—42.1 million—of the U.S. work force are Women. In 1977, 56% of Women 16 and over worked all or part of the year.

1. During the last decade the labor force expanded beyond government estimates. A key factor for this expansion has been the large influx of women workers. The number of women holding jobs has grown from 18 million in 1950 to 42.1 million in July 1978, a 134% increase. The total work force has grown from 62.2 million in 1950 to 100.6 million in July 1978, a 61.7% increase.

The overall pattern of growth does not focus, however, on movements within the different segments of women in the labor force. Participation rates vary considerably among women of different ages, family and marital status, race, and educational levels as outlined below.

Of the Women in the Workforce in March 1978, Nearly 80% were in Clerical, Sales, Service, Factory or Plant Jobs

2.a. According to the seasonally adjusted data released in March 1978, women workers were divided into the following occupational categories:

Professional-technical	16.1%
Managerial-Administrative	6.3%
Sales	6.8%
Clerical	34.7%
Craft	1.7%
Operative	11.2%
Non-Farm laborer	1.6%
Service, including private household	20.5%
Farm laborer	1.1%

2.b. These data do not show the concentration of men and women into certain job titles. For example, in professional jobs 60% of the women are non-college teachers or nurses, while men tend to be lawyers, doctors, or college professors. Within each occupational category the wages between men and women vary considerably. For every dollar earned by a man, a woman in the same job category earns significantly less. As of May 1977, the wage gap was:

	Women	Men
Sales	$.45	$1.00
Clerical	$.64	$1.00
Service	$.65	$1.00
Manufacturing	$.59	$1.00

In 1977 Full-Time Women Workers Had a Median Income* of $6,256 Less Than Men

3. Women working full-time, year round in 1977 had a median income of $8,814, while men's median income was $15,070. Women made 58.5¢ to every dollar made by men. In 1955, women's median income was $2,734 to men's $4,246 (64.3¢ to the dollar made by men.)

Women of Spanish origin had the lowest income of any racial/ethnic group. Their income was less than half of white male's. In 1977, the median annual income for men and women by race was:

		Percent of White Males
White Males	$15,378	100%
Spanish Origin Males	$10,935	71.1%
Black Males	$10,602	68.8%
White Females	$ 8,870	57.6%
Black Females	$ 8,290	53.9%
Spanish Origin Females	$ 7,599	49.4%

**Income includes earnings plus social security, investments, etc.*

On an Average, Women Who Work Full-Time Earn 59 Cents for Every $1 Earned by Men*

4. During the last 25 years, women's earnings as a percent of men's have dropped steadily. In 1955, full time women workers earned 64¢ to men's one dollar. By 1960 this figure had dropped to 61¢. Ten years later in 1970, women's earnings were calculated to be 59.4¢ per men's one dollar. 1977 census data show that the median annual earnings for full time male workers was $14,626 and for female workers was $8,618 or 58.9%. *Data represent earnings, not total income, as in #3.

In 1976, About One in Every Ten Working Women Belonged to a Union

5. Of the 38 million women workers in 1976, 11.3% belonged to a *labor union*, down from 12.6% of women workers in 1970. Between 1970-76, the number of unionized working women increased from 4 to 4.3 million, a 7.5% increase. The total number of union members increased from 19.2 to 19.5 million,

a 1.5% increase. Women were 20.7% of all union members in 1976.

15.9% of all working women belonged to *unions and associations* in 1976. Women members increased from 5 to 6.1 million, a 22% increase; while overall membership increased from 21.1 to 22.8 million, a 33% increase, between 1970-1976.

The following percentage of all women in these occupations were union members in 1975:

- 34.1% of blue collar workers, including craft, operatives and non-farm laborers
- 11.5% of clerical workers
- 11.1% of service and private household workers.
- 6.2% of sales workers

For further information see August 1978 *Monthly Labor Review*, "Women in Labor Organizations: Their Ranks are Increasing," Bureau of Labor Statistics, U.S. Department of Labor.

Nearly 7 Out of Every 10 Women Born Between 1954-1958 are Now in the Work Force

6. In July 1978, 69% of women between 20 and 24 years of age, and 62% of women between 24 and 34 years of age, were working or looking for work. These figures have increased from 46% and 36%, respectively, in 1960. The only age group in which fewer than one-half of women currently work for pay is that group of 55 and over.

PERCENTAGE OF WOMEN IN U.S. LABOR FORCE

	Annual Averages			July 1978 Seasonally Adjusted
	1960	1970	1977	
18 and 19 years	50.9	53.6	60.5	62.4
20 to 24 years	46.1	57.7	66.5	69.1
25 to 54 years, total	42.9	50.1	58.4	60.5
25 to 34 years	36.0	45.0	59.5	62.6
35 to 44 years	43.4	51.1	59.6	61.5
45 to 54 years	49.8	54.4	55.8	57.3
55 to 64 years	37.2	43.0	41.0	40.9
65 years and over	10.8	9.7	8.1	8.5

The Number of Married Women in the Work Force is Over 5 Times as Large as in 1940

7. The change in distribution of married women workers (husband present) has been the most dramatic of all categories of female jobholders. In 1940, these married women comprised only 30%, or 4.2 million, of all women workers. In March, 1978, 55.6% nearly 23 million, of all female workers were married with husbands present.

Since 1970 the number of divorced women workers has doubled—the number rose from 1.9 million in 1970 to 3.9 million in March 1978. The number of never married single women jobholders increased from 7 million in 1970 to 10.2 million in 1978.

Overall, of the 42 million working women in the United States, 25% are single, 56% are married, 4% are separated, 5.5% are widowed and 9.5% are divorced.

The highest participation rate (74%) of any group of women classified by marital status are those who are divorced. In March, 1978, percentages of women jobholers 16 years or older in the various groups were never married—60.5%; married, husband absent—56.8%; husband present—47.6%; and widowed—22.4%.

More Than Half of All Husband-Wife Families in 1978 Had Two or More Wage Earners

8. In March 1978 there were 57.2 million families in the United States. Of these 47.4 million had both husband and wife present, representing 83% of all families. In nearly 6 out of 10 of all husband-wife families, both partners held paid jobs.

Female-headed families accounted for 8.2 million, or 14.4% of all American families, while male-only headed families totaled 1.6 million.

At the top of the family income scale are those with two or more earners—the husband and second family member other than the wife, though she is present. The median income for these families in 1977 was $23,945. At the bottom of the family income scale, excluding those without earners, are single-earner families headed by women. These families have a medium income of $7,977 per year.

Average American family incomes for 1977 were:

Total, all families	$16,146
one earner	13,218
two earners or more	20,415
Husband-wife families, total	17,720
Total, families headed by women	7,765
Total, families headed by men	14,538

The National Commision on Working Women is a nongovernmental, action-oriented body. It was created to focus on the needs and concerns of that approximate 80% of women in the workforce who are concentrated in lower-paying, lower-status jobs in service industries, clerical occupations, retail stores, factories and plants.

Commission members are women and men representing business, labor, the Congress, the media, academia and working women themselves. As its secretariat, the Center for Women and Work implements the Commission's programs, seeks to achieve its overall goals, and serves as a national exchange for ideas, information and research related to the world of women in the workforce. The center is a separate operational unit within the National Manpower Institute, a private, nonprofit organization dedicated to "the fullest and best use of the human potential." Major funding is through a grant from the National Institute of Education (Department of HEW), with special project funds from the Ford Foundation and the Rockefeller Family Fund, and private corporations. Sources for statistics are: U.S. Departments of Labor and Commerce, September 1978.

Student Problems

WOMEN IN THE WORKFORCE

PROBLEM I:

1. a. If 42% of the workforce in 1978 were women, what percentage were men?

b. What was the number of men workers in 1978?

c. Show how the value 134% was obtained.

d. Show how the value 61.7% was obtained.

e. What was the percentage increase of men workers from 1950 to 1978?

42%—42.1 million—of the U.S. work force are Women. In 1977, 56% of Women 16 and over worked all or part of the year.

1. During the last decade the labor force expanded beyond government estimates. A key factor for this expansion has been the large influx of women workers. The number of women holding jobs has grown from 18 million in 1950 to 42.1 million in July 1978, a 134% increase. The total work force has grown from 62.2 million in 1950 to 100.6 million in July 1978, a 61.7% increase.

The overall pattern of growth does not focus, however, on movements within the different segments of women in the labor force. Participation rates vary considerably among women of different ages, family and marital status, race, and educational levels as outlined below.

PROBLEM II:

2. a. Using the data in the occupational category table, verify that "Nearly 80% were in clerical, sales, service, factory or plant jobs."

   b. Using the "wage gap" table, complete the table below by calculating values for women:

Of the Women in the Workforce in March 1978, Nearly 80% were in Clerical, Sales, Service, Factory or Plant Jobs

2.a. According to the seasonally adjusted data released in March 1978, women workers were divided into the following occupational categories:

Professional-technical	16.1%
Managerial-Administrative	6.3%
Sales	6.8%
Clerical	34.7%
Craft	1.7%
Operative	11.2%
Non-Farm laborer	1.6%
Service, including private household	20.5%
Farm laborer	1.1%

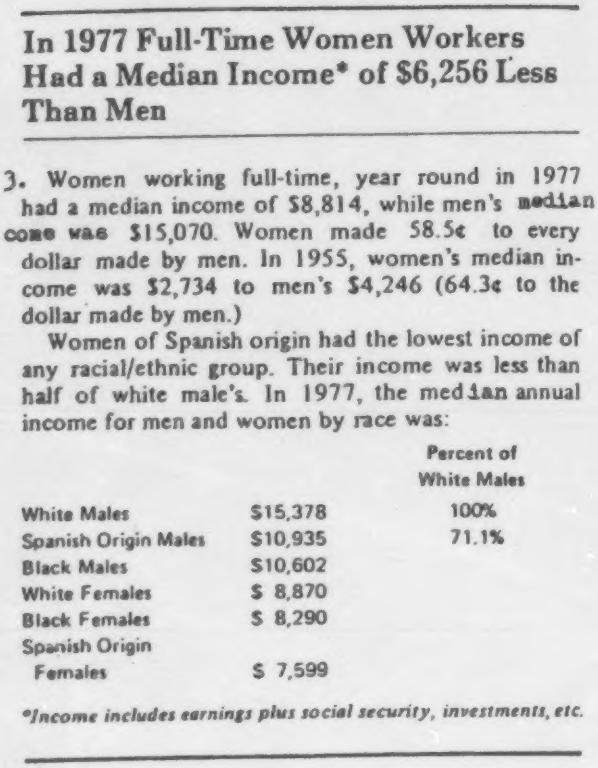
2.b. These data do not show the concentration of men and women into certain job titles. For example, in professional jobs 60% of the women are non-college teachers or nurses, while men tend to be lawyers, doctors, or college professors. Within each occupational category the wages between men and women vary considerably. For every dollar earned by a man, a woman in the same job category earns significantly less. As of May 1977, the wage gap was:

	Women	Men
Sales	$.45	$1.00
Clerical	$.64	$1.00
Service	$.65	$1.00
Manufacturing	$.59	$1.00

	Average Monthly Earnings	
	Women	Men
Sales		$ 800.00
Clerical		650.00
Service		1,500.00
Manufacturing		1,355.00

WOMEN IN THE WORKFORCE

PROBLEM III:



In 1977 Full-Time Women Workers Had a Median Income* of $6,256 Less Than Men

3. Women working full-time, year round in 1977 had a median income of $8,814, while men's median income was $15,070. Women made 58.5¢ to every dollar made by men. In 1955, women's median income was $2,734 to men's $4,246 (64.3¢ to the dollar made by men.)

Women of Spanish origin had the lowest income of any racial/ethnic group. Their income was less than half of white male's. In 1977, the median annual income for men and women by race was:

		Percent of White Males
White Males	$15,378	100%
Spanish Origin Males	$10,935	71.1%
Black Males	$10,602	
White Females	$ 8,870	
Black Females	$ 8,290	
Spanish Origin Females	$ 7,599	

*Income includes earnings plus social security, investments, etc.

3. a. Complete the adjacent table.

b. What proportion of Black male income is Black female income?

c. What proportion of Spanish origin male income is Spanish female income?

MATHEMATICS PROBLEMS

The attached summary, AN OVERVIEW OF WOMEN IN THE WORKFORCE, may be used as the basis for exercises in performing percentage calculations in mathematics classes. Examples of problems are presented using information from three sections of the attached summary. You may wish to design problems using statistics from other sections or additional problems from data in these three sections.

> NOTE I: The data provided on women workers represent women who earn income as salaries and wages. These data do not give information about women who work only in their homes caring for their families and do not receive salaries or wages for their work.

1. a. If 42% of the workforce in 1978 were women, what percentage were men?

Solution: 100% - 42% = 58% men.

b. What was the number of men workers in 1978?

Solution: 100.6 million total workers - 42.1 million women workers = 58.5 million men workers.

c. Show how the value 134% was obtained.

Solution: 42.1 million - 18 million = 24.1 million, the numerical increase in women from 1950 to 1978.

$\frac{24.1}{18.0}$ X 100% = 134%, the percentage increase of women in the workforce from 1950 to 1978.

d. Show how the value 61.7% was obtained.

Solution: 100.6 - 62.2 = 38.4 million workers of both sexes, the numerical increase from 1950 to 1978.

$\frac{38.4}{62.2}$ X 100% = 61.7%, the percentage increase of all workers from 1950 to 1978.

e. What was the percentage increase of men workers from 1950 to 1978?

Solution: 100.6 - 42.1 = 58.5 million men workers in 1978.
62.2 - 18.0 = 44.2 million men workers in 1950.
58.5 - 44.2 = 14.3 million increase in men workers from 1950 to 1978.

$\frac{14.3}{44.2}$ X 100% = 32.4%, the percentage increase in men workers from 1950 to 1978.

> NOTE II. From 1950 to 1978, the proportion of women workers increased over the proportion of men workers by about 100% (134% - 32.4%); however, in 1978, the workforce still contained 16.4 million more men than women.

Developed by Mary Jo Strauss
The American University Educational Equity Institute --------- January 12, 1980

2. a. Using the data in the occupational category table, verify that "Nearly 80% were in clerical, sales, service, factory or plant jobs."

Solution: Percentage of women in "professional/technical" and "managerial/administrative" jobs = 16.1% + 6.3% = 22.4%.

Other jobs represent 100% - 22.4% = 77.6% of women in the workforce.

77.6% is nearly 80%.

b. Using the "wage gap" table, complete the table below by calculating values for women:

	Average Monthly Earnings	
	Women	Men
Sales	$360.00	$ 800.00
Clerical	416.00	650.00
Service	975.00	1,500.00
Manufacturing	799.00	1,355.00

3. a. Complete the adjacent table. (Present the information in this section omitting the last four percentages in the table.)

Solution: $\frac{\$10,935}{\$15,378} \text{ X } 100\% = 71.1\%$

b. What proportion of black male income is black female income?

Solution: $\frac{\$8,290}{\$10,602} \text{ X } 100\% = 78.2\%$

c. What proportion of Spanish origin male income is Spanish female income?

Solution: $\frac{\$7,599}{\$10,935} \text{ X } 100\% = 69.5\%$

Exercises in Mathematics and the Social Sciences

WOMEN AND MEN IN THE UNITED STATES, 1978

The materials in this packet provide intermediate and junior high level students an opportunity to learn graph reading and interpretation.

The exercises will be useful in mathematics, statistics or social science classes and involve uncomplicated, straightforward arithmetical operations based on line and bar graphs. Students will gain experience in examining plotted data, and simultaneously, have an opportunity to discuss the status of women and men in employment, education and family life.

Students will need a ruler to compare and measure distances between lines and the lengths of bars on the graphs.

The four charts on which the exercises are based appeared in A Statistical Portrait of Women in the United States: 1978, Current Population Reports, Special Studies Series P-23, No. 100, U.S. Department of Commerce, Bureau of the Census, February, 1980.

CONTENTS: (1) Problems for students with an introduction about line and bar graphs.

(2) Packet for teachers with answers.

Prepared by Mary Jo Strauss
May, 1980

The Educational Equity Institute, The American University, 1980

Exercises in Mathematics and the Social Sciences

WOMEN AND MEN IN THE UNITED STATES, 1978

This exercise requires that you examine line and bar graphs and use information from the graphs to draw conclusions about the status of women and men in employment, education and family life. Observations you make based on the graphs will also help you to respond to several discussion questions included in the exercises. Figures I, II, III and IV are graphs which form the basis for four sets of problems following the introductory material about line and bar graphs.

You will need a ruler to compare and measure the lengths of bars and the distances between lines on the graphs.

Introduction to Line and Bar Graphs

Tables of data and graphs. Plotting data on a graph is often a more useful method for presenting data than listing columns of numbers in a table. A graph enables the observer to make immediate conclusions and comparisons based on quick visual examination. Making conclusions from tables may require more concentration and even mental calculations. Moreover, a one-page graph may display the same information as several pages of tables.

The table below contains numbers which were used in preparing Figure I. Do you feel that it is more, or less, difficult to understand the status of the different groups from the table of numbers or when using the graph?

Median Earnings of Year-Round, Full-Time Workers with Income by Race and Sex: 1970 - 1977

	WOMEN		MEN	
Year	Black	White	Black	White
1977	$8,197	$8,672	$10,445	$15,060
1976	8,144	8,680	10,764	14,704
1975	8,048	8,459	10,829	14,366
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
1970	6,490	8,446	9,638	14,294

The numbers in the table are more precise, but visualization of the comparisons is definitely easier when using the graph in Figure I.

What is a graph? A graph is a plot, or a picture, of numerical data. The graphs in this exercise and most graphs, in fact, have the independent variable plotted along the horizontal axis and the dependent variable plotted on the vertical axis.

The independent variable measures some quality that has definite whole number values, sometimes called discrete values. In these exercises the independent variables are years in Figures I and II and ages of persons in Figures III and IV.

The dependent variables in these problems depend on events in a particular year or on the experiences of persons of a particular age. A dependent variable is a function of the independent variable. For example, in Figure I the dependent variable is median annual earnings or income. Incomes in 1975 varied from incomes in 1970 because economic conditions varied from those in 1970. Examine Figures II, III, and IV and name the dependent variables.

To plot data on a graph, you need special paper, called graph paper which has small divisions along the horizontal and vertical directions enabling you to be very accurate in your measurements along each of the directions. If you have never made a graph, you may want your teacher to help you learn this following these exercises. Performing the exercises beforehand should help you to understand the graph-making process.

Differences between Line and Bar Graphs. Line graphs are useful when continuous data is available. In Figures I and III, the data is plotted continuously for each year or age in the period analyzed. Bar graphs are useful when data is available for only certain values of the independent variable, or if selected data is of interest.

In the bar graph in Figure II, the data is plotted for the years 1970, 1975 and 1978 only. The values for men and for women for each of these years and from year to year can be directly compared from this bar graph.

Plotting data on bar graphs requires more effort than plotting line graphs, but the results can be more effective, particularly if contrasting colors or tones are used, which enable the user to make comparisons readily.

Figure III shows how it is possible to plot three sets of related information as line graphs on a single page. Figure IV is a bar graph which displays data by groups. In this figure, the proportion of persons in each of four age groups who live alone are compared side by side by sex and for each of two different years. Figures III and IV are good examples of how graphs can effectively and efficiently display all the information on one page that would require several pages if displayed in Tables.

Exercises with Line and Bar Graphs

I. Median Earnings: 1970 - 1977

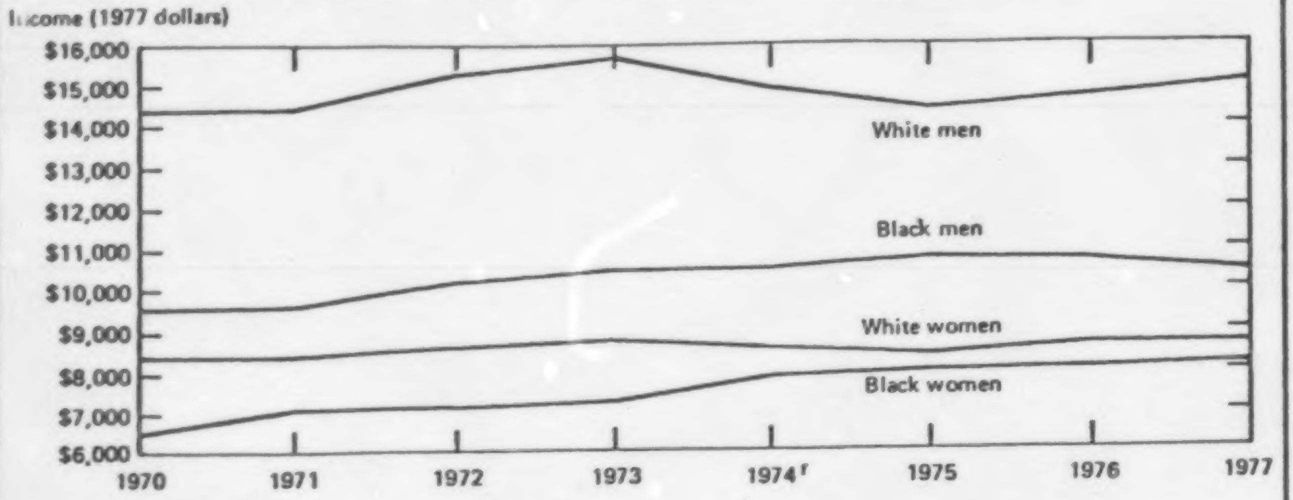
Using the line graph above, find answers to the questions below.

1. In which year was the earning power of white men greatest above that of white women?

2. During this seven year period, which group appears to have increased its earnings the most? the least?

Figure I.

Median Earnings of Year-Round, Full-Time Workers With Income, by Race and Sex: 1970 to 1977
(Persons 14 years and over)



rRevised

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Series P-60, Nos. 118 and 80.

3. (a) Using the graph in Figure I and a ruler to help you locate the correct positions on the plot, complete Table I. Check(✓) the highest and lowest earnings in each vertical column and calculate the difference between the maximum and minimum median earnings for each group.

Table I.

Year	Earning Power of:			
	Black Women	White Women	Black Men	White Men
1970	$6,500	$8,400	$ 9,600	$14,300
1973	7,200	8,800	10,500	15,700
1975				
1977				
Max. - Min. Difference				

(b) Do the calculated differences in Table I confirm your answers to Question 2?

4.(a) From your table calculate the difference between white men's earning power and that of each of the other groups for 1977:

White men - Black men = ___________

White men - White women = ___________

White men - Black women = ___________

(b) List some reasons why adults earn different salaries.

II. Employment Status by Sex.

Figure II is a bar graph representing people in the United States who are over 16 years of age. The height of the bars represents the population of women and of men in this age group during each of the three years, 1970, 1975, and 1978.

1.(a) Using the bar graph complete the table below.

Table II.1.
Population Over 16 Years of Age

Year	Women (millions)	Men (millions)	Total (millions)
1970			
1975			
1978			
Increase (1970 to 1978)			

(b) How many more older women than older men lived in the United States in 1970? Confirm that this difference was essentially unchanged by 1978. Are you surprised that there are so many more women than men in this age group in the population?

(c) Calculate the proportions (percentages) of men and of women in this age group for 1978.

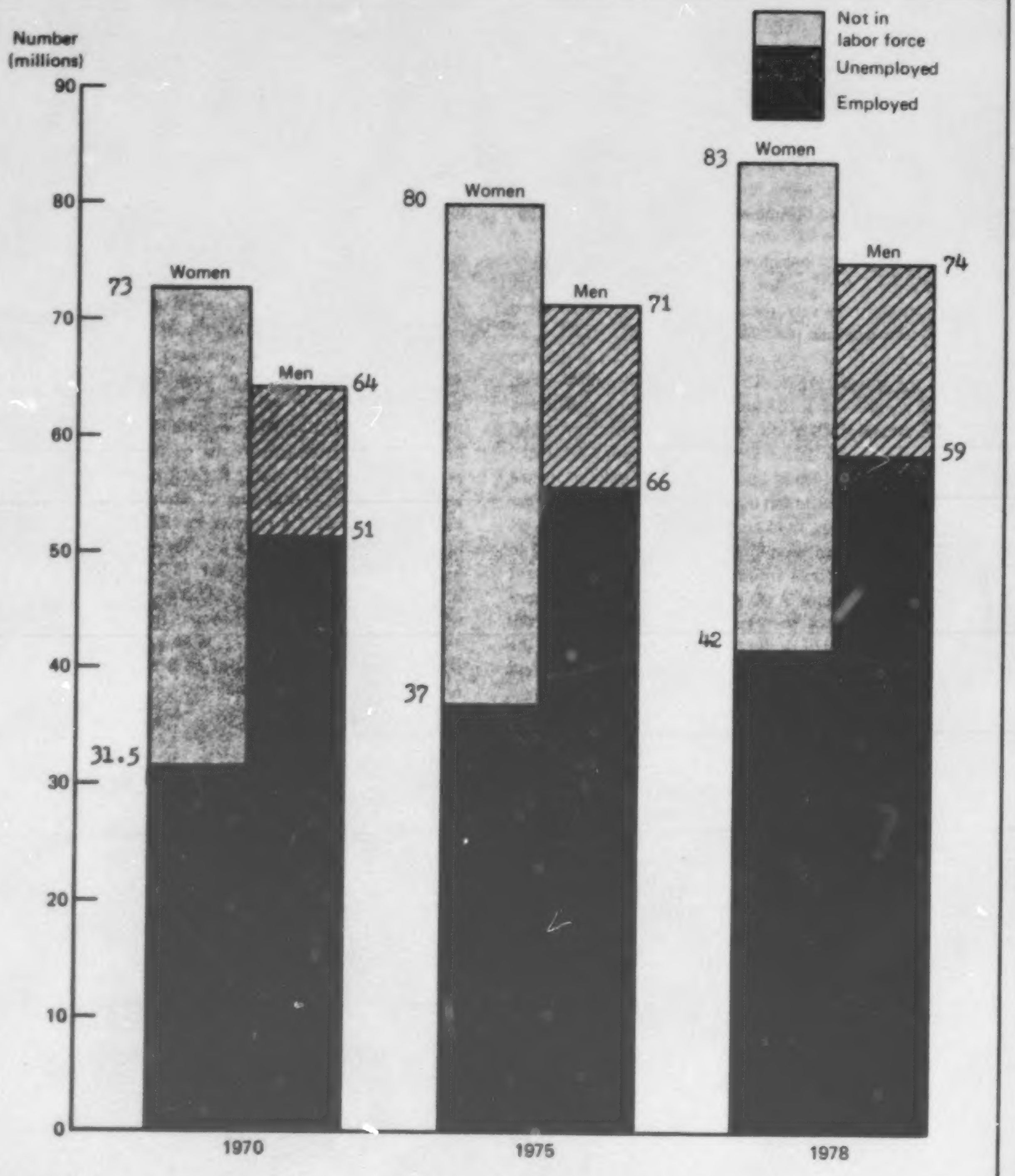
2. The top section of each bar represents people who are not in the labor force; that is, people who at this point in their lives are not earning a salary or wages and are not looking for work. The interior section of each bar represents unemployed people; that is, people who are usually employed, but for some reason are out of a job and are trying to find one. The lower, darkest section of each bar represents employed people - those who are earning a salary or wages for their work.

(a) Judging from your visual observations, in which of the years on the chart were the most men and women unemployed? In which year were the fewest unemployed?

(b) In which year were the most employed? In which year were the fewest employed?

Figure II

Employment Status, by Sex: Annual Averages for 1970, 1975, and 1978



Source: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, Vol. 26, No. 1; Vol. 22, No. 7; and Vol. 17, No. 7.

(c) Complete the table below using numbers from Figure II:

Table II.2.

Employment Status of Women and Men

1970 Status	Women		Men		Total Labor Force
	Millions	Percent	Millions	Percent	Millions
In the Labor Force (x)	32		51		83
Not in the Labor Force (y)	41				
Ratio of x:y	about 3:4		4:1		

1978 Status	Women		Men		Total Labor Force
	Millions	Percent	Millions	Percent	Millions
In the Labor Force (x) Not in the Labor Force (y)					
Ratio of x:y					

(d) Using the ratios you determined from Table II.2., compare the participation of men and women in the labor force in 1970 and 1978.

3. Below are some questions for discussion:

   (a) What do you think men who are not in the labor force are doing with their time?

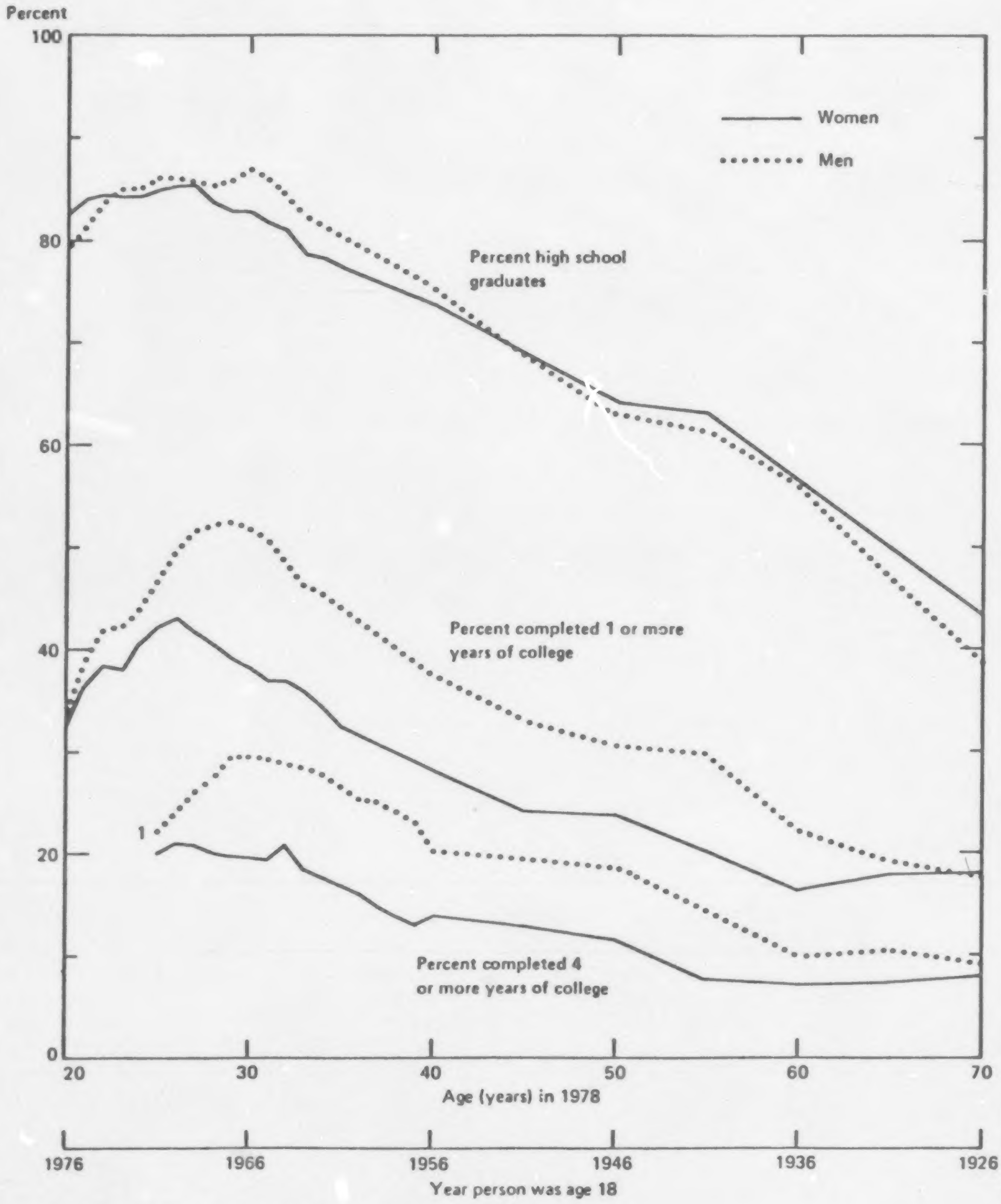
   (b) What are women who are not in the labor force doing with their time?

   (c) What are some reasons why women and men are unemployed at a particular time?

Figure III

Educational Attainment

Percent of Persons 20 to 70 Years Old, by Years of School Completed and Sex: 1978



[1] Data not applicable for persons 20 to 24 years old.

Source: U.S. Department of Commerce, Bureau of the Census, unpublished 1978 Current Population Survey data.

III. Educational Attainment.

This line graph compares the educational attainment of men and of women and shows that the percentage of persons of each sex who graduate from high school has increased each year since 1926, about the time when your great-grandparents were receiving their education.

1. Comment on the percentages of men and of women:

   (a) who have received high school diplomas during this 50 year period;

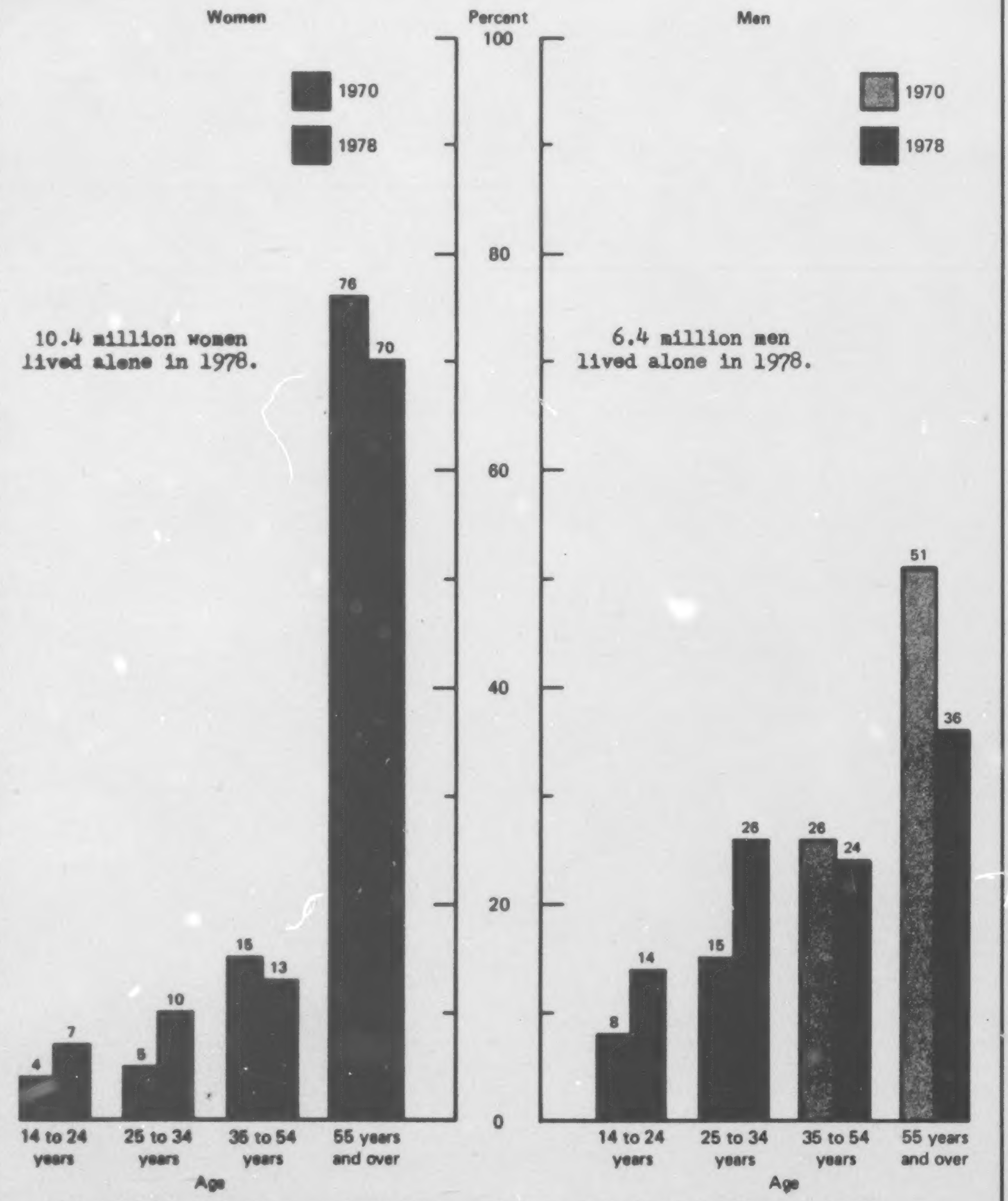
   (b) who have attended college in this period; and

   (c) who have graduated from college in this period.

2. Would the fact that a higher proportion of men than of women have received college training account for the higher earnings of men over women as shown in Figure I?

Figure IV.

Age Distribution of Persons Living Alone, by Sex: 1970 and 1978
(Persons 14 years and over)



10.4 million women lived alone in 1978.

6.4 million men lived alone in 1978.

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, No. 338; and unpublished 1970 Current Population Survey data.

IV. Age Distribution of Persons Living Alone.

This bar graph shows the percentage distribution of women and of men in different age groups who lived alone in 1970 and in 1978.

1.(a) List some reasons why people live alone. Are these reasons different for men than for women?

(b) According to the numbers on the chart, many more women than men lived alone in 1978. Calculate that value. What is the total number of persons who lived alone in 1978? What proportion of this total were women? were men?

2.(a) What is an outstanding feature of Figure IV that immediately attracts your attention?

(b) In Figure II we learned that there are more older women than older men in the United States. Is it then surprising that a higher proportion of persons who live alone are women?

(c) What are some similarities and some differences in the graph for men and the one for women?

(d) Do you notice that the sum of all percentages on the graph for each sex and for each year totals 100%? Confirm this. Why is this so?

3.(a) In 1970, 76% of all women who lived alone were 55 years of age, or older. In 1970, what was the percentage of women who live alone who were younger than 55? who were younger than 35?

(b) Complete Table IV.

Table IV.
Age Distribution of Persons Living Alone

	Proportion of Women			Proportion of Men		
	Over 55 yrs.	Below 55 yrs.	Below 35 yrs.	Over 55 yrs.	Below 55 yrs.	Below 35 yrs.
1970	76	24				
1978	70	30				
Percent Change 1970 to 1978	-6%	+6%				

(c) Can you think of reasons why between 1970 and 1978 the distribution of men who live alone increased in the younger age groups more than for women?

Exercises in Mathematics and the Social Sciences

WOMEN AND MEN IN THE UNITED STATES, 1978

The exercises in this packet are based on the graphs in Figures I, II, III, and IV comparing the status of women and men between 1970 and 1978 in the following areas:

1. Median earnings
2. Employment status
3. Educational attainment
4. Age distribution of persons living alone

The four sets of problems and discussion questions based on the four graphs are intended to augment existing lessons on data presentation and analysis in mathematics, statistics, or social science. The exercises are intended to help students read and analyze plotted data and also to stimulate discussion of men's and women's status in our society. The four problems are independent of one another, so that students can be assigned different problems, or the problems could be assigned as special projects to selected students.

Students will draw a number of conclusions about men's and women's lives from discussing the data which show women's position in the areas discussed to be generally more negative. The data do show women's status to be improving in most areas other than with respect to earnings.

Some of the observations to be made as a result of these exercises are:

- The median earnings of women workers are significantly lower than the median earnings of men workers.
- Many more men than women are in the labor force at any one time, although the number and proportion of women workers are increasing.
- Men's educational attainment has exceeded that of women over the past fifty years, but currently about the same proportion of women as men attend college.
- Women live longer than men.
- A higher proportion of women over 55 years of age live alone and a higher proportion of men younger than 55 live alone.

As students discuss these observations, they will better understand the importance of sex equity, equal opportunity, and affirmative action policies.

I. From Figure I, Median Earnings: 1970 to 1977

1. 1973 is the correct response to all three questions.

2. Black women's earnings have increased most, but remain far below men's earnings.
White women's earnings increased only slightly during this seven-year period.

3.(a)

Table I.

Year	Earning Power of:			
	Black Women	White Women	Black Men	White Men
1970	$6,500	$8,400	$ 9,600	$14,300
1973	7,200	8,800	10,500	15,700
1975	8,000	8,400	10,800	14,400
1977	8,200	8,600	10,400	15,000
Max. - Min. Difference	$1,700	$ 400	$ 1,200	1,400

(b) Yes

4.(a) For 1977, white men's median earnings were $4,600 greater than black men's earnings, $6,400 greater than white women's, and $6,800 greater than black women

(b) A person's earning power is related to the type of occupation, to education and training, job experience, geographical location and the number of persons competing for employment. The data in Figure I also suggest that sex and race are factors, although discrimination on the basis of sex and race in employment is illegal. In only a few jobs are strength, size or sex important factors; for example, in professional sports, acting, singing, dancing, modelling, etc.

II. From Figure II. Employment Status by Sex

1.(a)

Table II.1.
Population Over 16 Years of Age

Year	Women (millions)	Men (millions)	Total
1970	73	64	137
1975	80	71	151
1978	83	74	157
Increase (1970 to 1978)	10	10	20

(b) 73 - 64 = 9 million more older women than older men in 1970.

83 - 74 = 9 million more older women than older men in 1978.

Women in the United States tend to outlive men. Women born in 1970 can expect to live an average of 7.7 years longer than men born in that year, according to U.S. Census data.

(c) Women over 16: $\frac{83}{157} \times 100\% = 53\%$

Men over 16: $\frac{74}{157} \times 100\% = 47\%$

Note that the U.S. population (including persons of all ages) was 218,548,000 in 1978. Although women comprise 53% of the adult population over 16, they are 51.3% of the total population.

2.(a) Unemployed - highest in 1975
- lowest in 1970

(b) Employed - highest in 1978
- lowest in 1970

2.(c)

Table II.2.

Employment Status of Women and Men

1970 Status	Women		Men		Total Labor Force
	Millions	Percent	Millions	Percent	Millions
In the Labor Force (x)	32	39%	51	61%	83
Not in the Labor Force (y)	41	76%	13	24%	54
Ratio of x:y	about 3:4		4:1		3:2

1978 Status	Women		Men		Total Labor Force
	Millions	Percent	Millions	Percent	Millions
In the Labor Force (x)	42	42%	59	58%	101
Not in the Labor Force (y)	41	73%	15	27%	56
Ratio of x:y	1:1		4:1		about 2:1

(d) In 1970, for every 3 women in the labor force, 4 were not in the labor force; this means that 3 of 7 women, or 43% were in the labor force in 1970.

In 1978, for every woman in the labor force, one was not in the labor force; that is, ½, or 50% were in the labor force.

Men's participation in the labor force remained the same in 1978 as in 1970; that is, 4/5, or 80% of adult men were in the labor force both years.

From 1970 to 1978 the size of the labor force increased by 18 million workers (from 83 to 101) while the number of persons not in the workforce remained about the same. Since women were a larger part of the increase (greater by 10 million) than men (greater by 8 million), the proportion of women in the labor force also increased from 1970 to 1978 -- from 39% to 42%.

3.(a) Men not in the labor force may be retired, going to school (in various training programs, college, etc.), handicapped or recovering from illness, staying home to care for children, sufficiently wealthy to remain unemployed, taking a long vacation.

(b) Any of the above reasons also apply to women.

(c) Sometimes poeople quit one job in order to find one that offers better working conditions, a higher income, or more opportunities for advancement and responsibility. Sometimes people lose a job due to a "reduction in force;" for example, when economic conditions are poor and business is not good, an employer may be unable to pay all the employees. If a wife or husband changes jobs causing the family to move to a new location, then the husband or wife may become unemployed as a result of that move. Workers may be "fired" as a result of incompetence or dishonesty.

III. From Figure III. Years of School Completed.

1.(a) High school graduates: The percentages of women and of men in the population who graduate from high school have increased at about the same rate during the 50-year period. In the early years of the period a higher proportion of women than of men received high school diplomas. However, between 1955 and 1970, a higher proportion of men than of women graduated. More recently fewer men than women have completed high school.

(b) Some college completed: Prior to 1930, the proportions of men and of women who completed one year of college were approximately equal -- around 20%. During the 1930s college attendance for both men and women began to increase, but the increase for men was more rapid and was greater by as much as 10%, until around 1970 when college attendance for both sexes began to decline and converge.

(c) Received a college degree: The proportion of women college graduates increased from about 8% of the female population in 1926 to 20% in 1970. Men graduates increased from 9% of the male population in 1926 to 22% in 1970, but the proportion of men graduating increased much more rapidly than that of women and exceeded women by 10% during much of this period. Since 1968 the proportions of men and women college graduates have been converging. In 1978, according to Census Bureau data, 92 women enrolled in college for every 100 men who enrolled.

2. The higher educational attainment of men as compared with women does not account for differences in earning power. In fact, the Census Bureau reports that women college graduates on the average earn about two-thirds of what men college graduates earn - an amount about equal to what male high school graduates earn. The lower average income of women is related to the occupations women enter: that is, secretarial and clerical work, teaching, nursing and other low-paying jobs which offer little opportunity for advancement into positions of responsibility.

IV. Age Distribution of Persons Living Alone

1.(a) Some people choose to live alone. Others live alone because they lose their marriage partners through divorce, separation or death. When children grow up and move out of their childhood homes, they may leave a single parent (mother or father) who then lives alone. Young people may be left alone if both parents die or move away. Sometimes people's jobs require that they leave their families for a time; this is especially true of people in the military or foreign service. In our society it has been customary for children of divorced parents to live with their mothers, leaving the fathers to live alone; this custom has been changing in recent years and divorced fathers now more frequently live with their children.

(b) 10.4 million - 6.4 million = 4 million more women than men lived alone in 1978.

10.4 million + 6.4 million = 16.8 million persons lived alone in 1978.

$\frac{10.4}{16.8} \times 100\% = 62\%$ of those living alone are women.

$\frac{6.4}{16.8} \times 100\% = 38\%$ of those living alone are men.

2.(a) The height of the bars representing women living alone who are over 55 years of age is especially noticeable because it is so much greater than the height of the bars representing women in other age groups and men in all age groups.

(b) No, because many older women are widows; their husbands have died and their children live elsewhere.

(c) The graphs for women and men are similar in that for each sex the highest proportion living alone are over 55. For both sexes the proportion of each age group below 35 increased from 1970 to 1978, while the proportion for each age group over 35 declined in this period.

The graphs are different in that the proportion of men living alone who were in the over 55 age group declined much more (by 15%) in the 8 year period than did the proportion of women in this group (by 6%). At the same time the proportions of men who lived alone and who were in the younger age groups increased from 1970 to 1978 by more than the proportions of women.

2.(d) Yes.

For Women -

In 1970: 76 + 15 + 5 + 4 = 100

In 1978: 70 + 13 + 10 + 7 = 100

For Men -

In 1970: 51 + 26 + 15 + 8 = 100

In 1978: 36 + 24 + 26 + 14 = 100

The percentages total 100% because the graphs are based on all persons over 14 years of age of each sex who live alone. The graphs do not represent the proportion of all people in each age group who live alone, but they do represent the proportion of all persons living alone who are in each age group.

3.(a) 24% were younger than 55 in 1970.

9% were younger than 35 in 1970.

(b)

Table IV.
Age Distribution of Persons Living Alone

	Proportion of Women			Proportion of Men		
	Over 55 yrs.	Below 55 yrs.	Below 35 yrs.	Over 55 yrs.	Below 55 yrs.	Below 35 yrs.
1970	76	24	9	51	49	23
1978	70	30	17	36	64	40
Percent Change 1970 to 1978	-6%	+6%	+8	-15	+15	+17

(c) In recent years there has been an increase in the number of marriages ending in divorce and separation. Often, but not always, divorced men live alone until they remarry and this accounts for the increases in the proportions of young men living alone. If the divorced couple have children, the mother more frequently than the father lives with the children. The higher divorce rate is also reflected in the increased proportions of young women living alone, although the increases for women are much less than for men.

FOR OTHER MATHEMATICS ACTIVITIES . . .

See also . . .

Resource Mini-Collection:

- *Math Equals*
- *Becoming Sex Fair*
- *Overcoming Math Anxiety*
- *How High the Sky? How Far the Moon?*
- *Mathematics and Sex*

Resource Core Collection:

- *Women in Mathematics*

OVERVIEW

SCIENCE IS FOR EVERYONE

Women Scientists are Needed Too

Persons trained in natural and social science and in engineering hold many of the influential, policymaking positions in our country. They control and regulate our health care, energy and mineral resources, air quality, water supplies, transportation systems, economic policies and our national defense. Most scientists in our country are men, and, accordingly, women have little voice in setting policies that consume much of the national budget and have impact on all aspects of the lives of citizens.

Why so Few Women in Science?

In the early history of our country, only men were educated formally in colleges and universities. Since most scientists have college degrees, women had little opportunity to participate in science and the field was dominated by male workers, teachers and administrators who did not perceive a need for women scientists and engineers. Although women have been receiving degrees and entering professions since the latter part of the Nineteenth Century, science has long been stereotyped as a male profession. Moreover, scientists are stereotyped as geniuses, wizards and loners--very difficult role models for many young women who are socialized to believe they must be pretty, sociable and not too smart. Because of the socialization many girls have avoided the more rigorous secondary school science courses necessary as preparation for training in science and engineering fields.

Ideas and Materials for Making Change

At an early age girls and boys can become aware that women have succeeded in science and have been recognized for their achievements in many fields. Young people should also learn to recognize the diversity of science fields and appreciate that the results of scientific investigation and engineering enrich human lives at many levels, although work in science may not actually involve direct contact with human subjects.

Lists of women Nobel prize winners and women members of the National Academy of Science have been provided for use in class discussions or as resource lists for students interested in writing biographies or biographical sketches of scientists in a variety of fields.

WOMEN WHO HAVE WON THE NOBEL PRIZE IN SCIENCE

(The Nobel Prizes in Chemistry, Physics and Medicine or Physiology, are recognized as the highest awards in science. Nobel Prizes are not given in Mathematics.)

1903 Marie Sklodowska Curie (Polish-born).
Co-winner of the physics prize for discovery of radioactivity (in France).

1911 Marie Sklodowska Curie.
Winner of the chemistry prize for discovering the element, radium, and characterizing its properties (in France).

1935 Irene Joliot-Curie (French-born).
Co-winner of the chemistry prize for artificially producing radioactive elements (in France).

1947 Gerty Radnitz Cori (Austrian-born).
Co-winner of the prize in physiology for discovering the biological conversion of glycogen to utilizable sugar (in the United States).

1963 Maria Goeppert Mayer (German-born).
Co-winner of the physics prize for proposing the shell model of the atomic nucleus (in the United States).

1964 Dorothy Crowfoot Hodgkin (British-born).
Won the prize in chemistry for determining the biochemical structure of Vitamin B_{12} and penicillin (in England).

1977 Rosalyn Sussman Yalow. (American-born).
Co-winner of the prize in medicine for discovery and development of the radioimmunoassay technique (in the United States).

NOTE: Yalow is the first woman to win the prize in science who was born and educated in the United States. Cori and Mayer, who were foreign-born, became U.S. citizens as adults.

Compiled by Mary Jo Strauss for Educational Equity Institute, January, 1980

Women in the National Academy of Sciences

The National Academy of Sciences is a highly selective honorary society which advises the nation on science and technology related issues. Its elected membership of 1,250 represents less than one-half of one per cent of American scientists.

One woman was elected to the National Academy of Sciences in the 20s, another in the 30s. Two women were elected in the 40s, three in the 50s, and three in the 60s. Twenty-eight women have been elected so far in the 70s.

The 32 living female members of the National Academy of Sciences represent 2.6 per cent of the current membership.

1925 **Florence Rena Sabin**, *anatomist*, Rockefeller Institute of Medical Research, New York City. Deceased 1953.

1931 **Margaret Floy Washburn**, *psychologist*, Vassar College, New York. Deceased 1939.

1944 **Barbara McClintock**, *botanist*, Cold Spring Harbor Laboratory, New York.

1948 **Gerty T. Cori**, *biochemist*, Washington University Medical School, St. Louis, Deceased 1957. Shared Nobel Prize in medicine 1947.

1956 **Maria Geoppert Mayer**, *theoretical physicist*, University of California, San Diego. Deceased 1972. Shared Nobel Prize in physics 1963.

1957 **Katherine Esau**, *plant morphologist*, University of California, Santa Barbara, Emeritus.

1958 **Chien-Shiung Wu**, *nuclear physicist*, Columbia University, New York City.

1961 **Libbie Henrietta Hyman**, *zoologist*, American Museum of Natural History, New York City. Deceased 1969.

1967 **Berta Vogel Scharrer**, *anatomist*, Albert Einstein College of Medicine, New York City.

1968 **Rita Levi-Montalcini**, *neurobiologist*, Laboratorio Di Biologia, Rome, Italy.

1970 **Ruth Patrick**, *biologist, ecologist*, Academy of Natural Sciences, Philadelphia.

1970 **Rebecca Craighill Lancefield**, *bacteriologist*, Rockefeller University, New York City.

1971 **Mildred Cohn**, *biochemist*, University of Pennsylvania School of Medicine, Philadelphia.

1971 **Eleanor Jack Gibson**, *psychologist*, Cornell University, New York.

1972 **Gertrude Scharff Goldhaber**, *physicist*, Brookhaven National Laboratory, New York.

1972 **Elizabeth Shull Russell**, *geneticist*, Jackson Laboratory, Maine.

1973 **Beatrice Mintz**, *medical geneticist*, Institute for Cancer Research, Philadelphia.

1973 **Helen M. Ranney**, *hemoglobin biologist*, University Hospital, San Diego.

1973 **Helen Brooke Taussig**, *pediatric cardiologist*, Johns Hopkins University, Baltimore, Emeritus.

1974 **Estella Bergere Leopold**, *research botanist*, University of Washington, Seattle.

1974 **Sarah Ratner**, *biochemist*, Public Health Research Institute, New York City.

1975 **Gertrude Mary Cox**, *statistician*, North Carolina State University, Raleigh, Emeritus. Deceased 1978.

1975 **Frederica Annis De Laguna**, *anthropologist*, Bryn Mawr College, Pennsylvania.

1975 **Dorothea Jameson**, *psychologist*, University of Pennsylvania, Philadelphia.

1975 **Margaret Mead**, *cultural anthropologist*, curator, American Museum of Natural History, New York City. Deceased 1978.

1975 **Rosalyn S. Yalow**, *medical physicist*, Bronx Veterans' Administration Hospital, New York City. Shared Nobel Prize in medicine 1977.

1975 **Dorothy Millicent Horstmann**, *epidemiologist, pathogenesist*, Yale University School of Medicine, Connecticut.

1976 **Charlotte Friend**, *oncologist*, Mount Sinai School of Medicine, New York City.

1976 **Julia Robinson**, *mathematician*, University of California, Berkeley.

1977 **Elizabeth Florence Colson**, *anthropologist*, University of California, Berkeley.

1977 **Elizabeth Fondal Neufeld**, *biochemist*, National Institute of Health, Maryland.

1977 **Ruth Sager**, *geneticist*, Sidney Farber Cancer Institute, Boston.

1977 **Evelyn Maisel Witkin**, *geneticist*, Rutgers University, New Jersey.

1978 **E. Margaret Burbridge**, *astronomer*, University of California, San Diego.

1978 **Mary Rosamond Haas**, *linguist*, University of California, Berkeley, Emeritus.

1978 **Isabella L. Karle**, *physical chemist*, United States Naval Research Laboratory, Washington, D.C.

1978 **Elizabeth C. Miller**, *oncologist*, University of Wisconsin, Madison.

1978 **Mary J. Osborn**, *microbiologist*, University of Connecticut, Farmington.

Mary Jo Straus
—Research Consultant, Women's Studies

From: Increasing the Participation of Women in Scientific Research,
National Science Foundation.

SCIENCE-RELATED OCCUPATIONS *

	PERCENT FEMALE **	PERCENT MALE **
TOTAL WORK FORCE	40	60
Computer specialists	21	79
Engineers	1***	99
Life and Physical scientists	14	86
Pharmacists	18	82
Registered nurses	97	3
Health technologists and technicians	72	18
Engineering and science technicians	12	88
Electricians	1	99

* U.S. Department of Labor Statistics, Employment and Earnings, January, 1976., Vol. 22, No. 7

** Percentages have been rounded.

*** According to the National Science Foundation findings, Engineering is the one field in which entry level pay for women is, on average, higher than that for men.

FOR OTHER SCIENCE ACTIVITIES . . .

See also . . .

A. *Resource Mini-Collection*

   How High the Sky? How Far the Moon?

B. *Resource Core Collection*

   Hypatia's Sisters: Biographies of Women Scientists Past and Present

   Science Career Exploration for Women

   Women Scientists Roster

   I'm Madly in Love with Electricity: and other Comments About Their Work by Women in Science and Engineering

OVERVIEW

SELECTED LESSON PLANS

The lesson plans in this section represent a sampling of those developed and used by District of Columbia Public School educators who participated in the 1979-80 training workshops conducted by the Educational Equity Institute.

These are not hypothetical lessons. They were created and used in District of Columbia classrooms by your peers with excellent success. Because they were developed in the District, the content is appropriate for incorporation into your curricula.

Lessons are for grades K-9 and are arranged sequentially by grade. Most of the plans, while developed with specific grade levels and subjects in mind, are readily adaptable for older or younger students.

Topics of the lessons are widely varied with materials suitable for social studies, mathematics, literature, physical education, science, career exploration, media and other subjects. Lessons include such topics as:

- identifying sex bias in television and advertising
- women for whom District of Columbia schools are named
- exploring nontraditional careers
- "fairy tales" with main characters reversed
- female and male sports and sports figures

Try a few!

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Juanita B. Thompson, Teacher

SCHOOL: Mary Church Terrell Elementary School

GRADE LEVEL OR TARGET GROUP: Kindergarten

TOPIC: Sex-Roles

MATERIALS: Pictures form magazines and pictures of the student's family members and themselves. Nine 8x8 cards on which were printed Baby, 10, 20, 30, 40, 50, 60, 70, 80.

Objective(s):

Given non-sexist pictures of people of different ages; the student discusses the main idea of each picture while arranging the pictures in sequence by age.

Procedure:

1. Discuss the people who make up families (mother, father, brother, sister, baby). Ask if there are persons who are members of their families (grandmother, grandfather, aunts, uncles, cousins, nieces, nephews).

2. Ask each student to state his/her age. Then ask the ages of other members of the family while holding up the different age cards. Show the 20 card. Ask: Would grand-daddy be this age or mother? Display the other age cards on the chalkboard ledger. Then, ask a student if he/she can choose an age card for grand-daddy's age. Use other cards for the students to match family members' ages.

3. Using the magazine pictures allow the students to match each picture with an age card.

4. Using each magazine picture, allow the students to discuss whats happening in each picture. As the students discuss the pictures, the students will dictate sentences to the teacher.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Gladys M. Harris, Teacher

SCHOOL: Barnard Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 1

TOPIC: Social Studies: Learning About Our World of Work

Objective(s):

To develop the following understandings:

1. That there are all kinds of jobs
2. That all jobs are important to produce the things that people need and enjoy.
3. That people should choose jobs which they enjoy.

Procedure:

A. Pre-assessment of children's present level of knowledge and attitudes in the area of emphasis: (1) naming different types of jobs; (2) describing the duties of the occupations named; (3) naming people they know in various occupational roles; and (4) responding to the question, "What would you like to be when you grow up?"
B. Utilization of instructional material, "What You Can Be," a book which describes and illustrates pictorially people (men and women) working at jobs they enjoy. (Discussion based on questions and comments)
C. Expository statement by children of their future job choices, in answer to the question, "What would you like to be when you grow up?" (Paper used for writing statements were framed by pictures reflecting stereotypic occupational roles for the purpose of ascertaining the effectiveness of this lesson in promoting bias-free thinking.

Assessment Task:

All children chose stereotyped occupations in answer to pre-assessment question, "What would you like to be when you grow up." Following the use of bias-free learning materials, the job choices expressed were less culture-bound for girls. One girl chose to be U.S. President because she wanted to be in charge of America; one girl chose to be a barber because she didn't want people's hair growing so long that it got stepped on; another girl chose to be a pilot. All boys job choices remained within the stereotypic mold although the range of choices were broadened. The majority chose to become police officers. Promoting sex equity in education - freeing children's minds from culturally imposed limitations - will require the concerted efforts of all persons or agencies which exercise influence in the lives of children.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Claretha F. Smith, Teacher

SCHOOL: Van Ness Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 1

TOPIC: Language Arts - "Free Moments of the Students"

MATERIALS: Copies of Free Moments worksheet, crayons, pencils

Objective(s):

Given a worksheet the students will identify ten activities they enjoy doing regardless of sex.

Procedure:

1. Discuss with the children things they enjoy during free moments. List these on the chalkboard. Examples of some words: read, run, baseball, jump, tag, jacks, skip, write, ride, sing, dance, listen, etc.

2. After listing 20 or more words have children write his or her favorite activity on the worksheet so it becomes a self-portrait of activities he or she likes.

3. Ask children to compare their lists to see the similarities and the differences.

Discuss: Could both boys and girls do each of these activities? Why or or why not? Is there something you would like to do but did not put down because you thought only boys or girls do that?

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Paula G. Leftwich

SCHOOL: Mann Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 2

TOPIC: Roles and Titles as People

MATERIALS: Pictures, Books

Objective(s):

To identify roles and titles of community helpers as people, and not by their sex.

Procedure:

Ask the class: Could a woman put out a fire, connect telephones, chase robbers and write tickets, deliver newspapers, chair a meeting, fly a plane?

Ask the class: Could a man clean a house, babysit, shampoo and wash hair, be an airline host, be a telephone operator, be a secretary?

Show: Pictures of men and women in roles, as our society has stereotyped them

Show: Pictures of men and women in their new roles in "today's society"

Ask: How we could give titles out to community helpers without mentioning "their sex." Then inform children of todays new titles of community helpers: newsperson, flight attendant, firefighter, telephone operator, chairperson, repairperson, policeperson.

Assessment Task:

Give a set of pictures of community helpers and their titles (both stereotyped and new titles), have the children match titles with pictures - Take note of whether children match new titles or stereotyped titles with picture.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Sylvia S. Shaw, Teacher

SCHOOL: Syphax Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 2

TOPIC: Career Awareness

MATERIALS: Career pictures, poster: "We Can All Be . . ."

Objective(s):

To develop an awareness in students that both sexes can aim for any type of occupation they may desire.

Procedure:

1. Use of pictures that show women in nontraditional roles.
2. Oral discussion of occupations and "What do you want to be"?
3. Use of terms that are sex fair in my own language with pupils. Stress that pupils should use the same terms, for example, fire fighters, salesclerks.
4. Pupils do drawings of what they want to be, with labels to use on board in room.

Assessment Task:

1. Have students find and return pictures that show women and men in nontraditional roles.
2. Conduct "Maybe I'll Be" activity.
3. Re-question to see if pupils have changed minds about careers or expanded range of choice/options.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Phyllis C. Toliver, Teacher

SCHOOL: M. C. Terrell

GRADE LEVEL OR TARGET GROUP: Grades 2 - 3

TOPIC: Careers: "What Can I Be?"

MATERIALS: Pictures from magazines showing people doing nonstereotyped jobs

Objective(s):

Given a nonsexist picture of someone doing a job, the student writes a story about it and uses puppets to retell the story. A videotape of this lesson will be used for the school library (20 minutes).

Procedure:

1. Draw a picture and discuss different occupations. Who is the person who does that job?
2. Have the class draw the pictures, then choose several pictures to use for the story.
3. Choose a nonsexist picture of someone doing a job. Ask: (1) What is happening? (2) What do we call a person who does this kind of job? Pretend you are this person (act out). Write about the picture.

Assessment Task:

Pictures and stories written to make a booklet on community helpers and occupations. Tape can be used for viewing next year.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979 - 1980

DEVELOPED BY: Lauretta Jackson, Teacher

SCHOOL: Mann Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 3

TOPIC: Literature

MATERIALS: Children's fairy tale, "Rapunzel"

Objective(s):

To present a fairy tale with the main characters reversed. The role of Rapunzel is to be a boy; the Witch, a male ogre; the Prince, a Princess who rescues Rapunzel.

For boys and girls to evaluate how the sex changed roles of the main characters made them feel and why they felt as they did.

Procedure:

STEP I. The activity began with reading the fairy tale "Rapunzel" with roles reversed. The children listened to the story.

STEP II. An interest survey taken by the students asked three questions:

1. How did you enjoy listening to the story I just read?
2. Boys, how did you feel about Rapunzel being a boy?
3. Girls, how did you feel when you heard how the Princess rescued Rapunzel?

STEP III. Role Playing - 27 pupils divided into five casts of six characters. Some pupils played a part in two casts.

STEP IV. After two rehearsals of the five casts, the pupils presented the skits in the library.

Assessment Task:

"The children's delight with the skits was assessment enough."

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Elizabeth P. Simms

SCHOOL: Van Ness Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 3

TOPIC: Physical Education

MATERIALS: Storybook, rope, pencils, and paper

Objective(s):

After reading the story of Jo, Flo, and Yolanda the students will be able to list the number of females and males mentioned in the story.

Problem:

Not only do males participate in more sports than females, but their activities are well organized with established rules and regulations, facilities and coaching staff far exceed that of females. Girls are shown as more involved in free play and less inclined to be competitive.

Procedure:

Discuss the following questions:

1. Have you ever played in a game where there were two teams?
2. Did someone keep score?
3. Were there rules to play by?
4. Do you like playing on teams?
5. Were you not chosen to be on a team?
6. How did you feel?
7. If you were captain of a team, how would you choose your team mates?
8. Would you select both boys and girls for your team?
9. Do you think boys and girls should play on the same team?
10. Do you think boys play better than girls?

Activities:

1. Read story and discuss it.
2. Play a game of Double Dutch jump rope with both boys and girls. Discuss the game.
3. Play a game of Indian wrestling with both girls and boys. Discuss the game.
4. List famous sports figures male and females. List sports and categories. Discuss the qualifications needed to do well in each sport. Do they differ for females and males?
5. Have girls teach the boys a game and have boys teach the girls a game.
6. Invite the local high school sports figures to speak to class group.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Doris S. Thompson, Teacher

SCHOOL: Young Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 3-4

TOPIC: Careers

Objective(s):

Behavioral Objective: Given pictures and posters of people at work, the students will name the workers and describe the job they do with 100% accuracy. They will also tell the job they would like to do.

Procedure:

Instructional Activities

- Discussion of: work at home
  parents at work
  work they do
  neighborhood workers (using neutral gender and telling why)

- Use of charts
- Songs
- Poems
- Riddles
- Dramatizations
- Activity Cards (ex.: My favorite job is . . ., My favorite neighborhood worker is ...)

Questions

Who are some workers you know? Why do we need workers? What kind of work would you like to do? What workers do you see? Do you see men or women doing the work? Why do you think that is so? Can both men and women do the job?

Learning Activities

Pictures of workers in the community:
Tell whether picture shows male or female. Give examples where opposite sex can do that job. Let them know that men or women can do all jobs - that we no longer consider a job for a specific sex.

Posters
Picture Cards
Games
Dramatization
Chart

Assessment Task:

What did you learn today? What else would you like to learn? What did you enjoy most?

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Lillian S. Harris, Teacher

SCHOOL: Brookland School

GRADE LEVEL OR TARGET GROUP: Grade 4

TOPIC: Careers

MATERIALS: Worksheet listing various occupations

Objective(s):

To discover the thinking of eight and nine year olds at Brookland School as to which jobs are jobs for men or jobs for women or jobs for both women and men.

Procedure:

1. Pass out the work sheet to all students.
2. Read and describe the kind of work involved in each job. (Try not to mention men or women as each job is described.)
3. Help children read task to be completed.
4. Children are given plenty of time and help to complete the task.
5. Go over each job category and discuss answers and share knowledge.
6. Arrive at a conclusion--that both men and women do all of these jobs.

Assessment Task:

Ask the following questions and record responses.

1. How many of your mothers go to work each day?
2. Why did you choose the answer you have?
3. What were you thinking about when you chose each answer?
4. Have you seen people doing any of these jobs?
5. What job would you like to do when you grow up?

STUDENT WORKSHEET

AME_____________________________ GRADE ________

ATE_____________________________ CLASS ________

HAT DO YOU THINK?

LOOK AT THE JOB TITLE LISTED BELOW.
PUT W NEXT TO THE JOBS YOU THINK WOMEN DO.
PUT M NEXT TO THE JOBS YOU THINK MEN DO.
PUT B NEXT TO THE JOBS YOU THINK BOTH MEN AND WOMEN DO.

_____BELL HOP
_____ELECTRICIAN
_____HOTEL MANAGER
_____MINISTER
_____NURSES AIDE
_____NURSE
_____SALES PERSON
_____TAXI DRIVER
_____COUNSELORS
_____POET
_____WATCH REPAIR PERSON
_____CARPENTER
_____COMEDIAN
_____ACROBAT
_____DANCER
_____MUSICIAN
_____MODEL

_____REAL ESTATE SALESPERSON
_____BAKER
_____DOCTOR
_____FARMER
_____SECRETARY
_____WRITER
_____AIRLINE PILOT
_____TRUCK DRIVER
_____BUS DRIVER
_____ARTIST
_____BRICKLAYER
_____TEACHER
_____LIBRARIAN
_____ATHLETE
_____DENTIST
_____MAGICIAN
_____WINDOW WASHER

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Evelyn S. Roberson, Teacher

SCHOOL: Bruce-Monroe Elementary

GRADE LEVEL OR TARGET GROUP: Grade 4

TOPIC: Sex Bias in Television

MATERIALS: Television
Commercial Products

Objective:

Given a television assignment, the learner will be able to identify the propaganda techniques presented on television commercials.

Procedure:

Inform the learner that s/he will be looking at television to identify propaganda techniques used on television commercials. Emphasis is on the propaganda technique "Glittering Generalities."

In this lesson you will learn about the "Glittering Generalities" propaganda technique that is used on commercial television. However, you will also learn that commercial advertising is responsible for the programs that are viewed on commercial television.

QUESTIONS:

1. What is a commercial?
2. What kind of statements do you think business and industry make about their products and services?
3. Why do you think they try to influence the public?
4. Do you think they try to influence one sex more than they do the other sex in commercials?
5. How would you change the television commercial if one sex is used more than the other sex in a commercial?

Assessment Task:

1. Watch television programs during prime time (7:00 to 10:00) on Monday, Tuesday, and Wednesday. At school, the time will be from 9 to 10. List those commercials that use the propaganda technique "Glittering Generalities."

2. Students will select a commercial and role play it as it was viewed on television. Use the same commercial and role play it without regard to a person's gender.

In Barbara Williams' book, I Know A Mayor, she uses a female figure as a school principal, but a Mr. could be substituted without disturbing the story at all. In the mayor's office, again there are male and female jobs. The secretary and receptionist are women. The city clerk, news reporter, and city council are all men. Here is one of the sex-bias statements that my class and I found funny.

> Our city council has five councilmen. If they do a good job, they may be elected again. If not the voters will choose other men.

Glenette Turner would not allow storybooks to be forgotten when she wrote Surprise for Mrs. Burns. Girls were considered weak, and in Richard's words boys can help with things girls can't handle. In this case, it was decorating the room for a party.

Things are not any different in The Big Basketball Prize, by Marion Renick.

> He set out singing and jumping and watching his feet. Suddenly, he stopped cold. He heard girls giggling. Who said I want to jump at all? He threw down the rope and stomped off.

Assessment Task:

Discussion of sex-biased statements found within the reading materials.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Florine Russ, Librarian

SCHOOL: Syphax Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 5

TOPIC: Sex Stereotyping in Literature

MATERIALS: Various children's books

Objective(s):

The students will be able to identify and change words and statements that are sex-biased to better alternatives with 95% accuracy.

Procedure:

A definition for sex-bias was discussed openly in class. After students had given their opinions, we appointed one person from the class to find the definition in the dictionary. After choosing a working definition, we played a game. Sex-bias words were written on the board, and the class had to give alternatives. We then looked for sex bias-words and statements in different types of books. The class was divided into four sections and five members on each team. Each section was responsible for at least three sex-bias statements and three alternatives to those statements.

SAMPLE FINDINGS:

After carefully reading books, we found that women are as guilty as men in making such statements.

Greta Marie Warstell used these words to introduce her book, Jump the Rope Jingles to the Public. These pages contain the most often repeated jingles. Mother dedicates them to "the pony-tailers of today."

Books on careers were especially sex-biased. The older the books, the more obvious the sex-biased statements. These are but a few lines from THE TRUE BOOK OF POLICEMEN AND FIREMEN, by Irene Miner.

a. Policemen and firemen are big strong men.
b. Not everyone can be a policeman or fireman. He must be well and strong.
c. Is he a good worker?
d. Would he like his work?

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Ione G. Dixon, Teacher

SCHOOL: Syphax Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 5

TOPIC: Biased Materials

MATERIALS: Basic Goals In Spelling

Objective(s):

Given the class speller, Basic Goals in Spelling by Kattmeyer, the student will read the 36 mini-stories to identify sex bias on part of authors.

Procedure:

Each student reads through his own book. List all stories about men in one row, all stories about women in sepatate row. (Each story is about 13 short lines, located in lower corner of page)

Assessment Task:

Class decided that the speller used in class was biased because:

1. Out of 36 stories only two were about women, the rest were about men.
2. The author was really biased because the two stories about women were not even about human women, they were Greek Goddesses.
3. The students decided that whoever picked out the book for the schools to use was not a change agent or aware of Title IX.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Vinetta M. Baxter, Counselor

SCHOOL: W. B. Patterson Elementary School

GRADE LEVEL OR TARGET GROUP: Students, Grades K - 6

TOPIC: Women in Careers as Seen Through Advertisements

MATERIALS: Magazines, notebook paper, scissors, pencil or pen, tape or glue

Objective(s):

To bring about an awareness of women's roles today in what was known as "occupations not for women," through advertisements in magazines.

Procedure:

1. After a brief discussion on jobs for women--as the students recognize the woman's role in the job market--students are to look through magazines at the advertisements on careers, and select advertisements depicting women in jobs that are not usually offered to women such as, a woman line worker, a woman construction worker, a woman coal miner, etc.

2. Students will select four pictures of such nature and paste or glue the picture to paper.

3. The student will write a few sentences telling his/her understanding of why th woman may have chosen that occupation.

Follow-up: Students will continue to look for pictures in magazines that will show women in "usual male occupations."

Assessment Task:

Discuss additional findings with students.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Vera H. Smith, Teacher

SCHOOL: Mary Church Terrell Elementary School

GRADE LEVEL OR TARGET GROUP: Grade 4-6

TOPIC: Understanding Stereotypes

MATERIALS: Pictures from magazines

Objective(s):

Students would be able to identify stereotyped individuals from non-stereotyped individuals.

Procedure:

The teacher will:

1)discuss the words stereotype and non-stereotype

2)show pictures that were cut from magazines on stereotype and non-stereotype

3)discuss pictures by letting students tell or talk about pictures (which sex biased or not)

4)students role-play both words

Assessment Task:

Show how the pictures could be changed where there would be no sex biased and what we could do and say to try to stop sex-bias in the classroom as well as the school.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Evelyn M. Holmes, Teacher

SCHOOL: John F. Cook

GRADE LEVEL OR TARGET GROUP: Grade 6

TOPIC: Language Arts

MATERIALS: Super Sister Cards (see March 19th, 1980 Senior Weekly Reader)

Objective(s):

The students will be able to identify the contributions made by ten women in our society with 90% accuracy.

The students will be able to identify a wide variety of career possibilities regardless of sex.

Procedure:

Each child wrote a short paragraph about one woman who they would like to see on the Super Sister Cards.

Some of the women were Harriett Tubman, Lola Falana, Gladys Knight, J.C. Hayward, Shirley Chisolm, Barbara Jordan, Billie Jean King, Marian Anderson, Rosa Parks, Coretta King.

The class made our own Super Sister Cards. The children drew the face on the front of the paper and wrote a short summary of the person's contributions to society on the back.

Assement Task:

Discuss further with students women in politics, sports, music, history, broadcasting, etc.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Vera H. Smith

SCHOOL: Mary Church Terrell Elementary School

GRADE LEVEL OR TARGET GROUP: Grades 5-6

TOPIC: Math (Making word problems sex fair)

MATERIALS: Math Textbook

Objective(s):

The students will be able to identigy the word problems that are sex fair, relevant and interesting.

Procedure:

The teacher will:

1) tell students to turn to a particular page containing word problems
2) count the number of word problems which lack personal identification
3) determine the number of female vs. male references
4) compute ratio of those depicted in stereotyped roles to those in non-stereotyped roles.

Assessment Task:

Several worksheets are give wherein students have to pick out or underline the one showing stereotyped roles or non-stereotyped roles. Also, worksheets given teachers in Equity Workshop.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Catherine Booker, Teacher

SCHOOL: Browne Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 7

TOPIC: Choosing a Career

MATERIALS: flash cards (various careers), blackboard, magazines, props (future lesson)

Objective(s):

To discuss career choices available to both males and females, and to make them aware of their own biases in selecting a career.

Procedure:

1. A discussion was started about jobs and occupations. Students were asked to name jobs they would like to have and why. The conventional jobs like secretary, nurse, bus driver, teacher, lawyer, etc. were named.

2. They were then shown a set of flash cards with both conventional and unconventional jobs portrayed on them (randomly displayed by males and females). Students were asked for opinions concerning the cards as they were shown.

   Opinions included:

   a. No one is a cowboy now.
   b. Girls aren't football players.
   c. Boys don't make good cooks.

3. From these opinions we began to list on the board why women weren't suited for certain jobs and why men weren't suited for certain jobs. On the side for women were:

   1. Girls aren't strong enough.
   2. Somebody has to take care of the children.
   3. It doesn't look nice.
   4. Men would pick on them.
   5. They shouldn't try to be men.

On the side for men were:

1. Somebody would think they acted like girls.
2. The jobs don't pay enough.
3. Men can't do fine work like sewing, changing diapers, etc.
4. Men are built to withstand hard work and pain.

4. I let the opinions stay on the board while they started on their assignment, which continued on at home. Students were to find pictures in magazines that showed men and women doing what "they weren't supposed to be doing."

5. The next day, students shared their pictures with their classmates. We then went back to their "reasons why" on the board and evaluated them again. The discussion led to where these ideas of "women can't but men can and the reverse" came from. We named famous people who performed unconventional jobs like Harriet Tubman, female leaders of nations, women's basketball teams shown on national television, male chefs, etc.

6. The question was then asked: "What would you like to do?" and the answers were somewhat different.

Assessment Task:

A follow-up activity could be a "guess who" day. Students bring props of an occupation and explain why they can qualify and what skills are needed.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Emma I. Bonner, Teacher

SCHOOL: Browne Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 7

TOPIC: Sex Bias in School Textbooks

MATERIALS: Textbook, paper, and pencil

Objective(s):

Students will be able to discover sex bias on their own in their textbooks.

Procedure:

Students were given the following instructions. Students, look through your textbooks on every page and observe the pictures. Write down the page number and a brief description of the picture. For example, on page 283 there is a picture of a girl playing a cello. You could write, "page 283 - girl and man are in a picture to show how a cello produces sound." Make sure that you write down how many men/boys - women/girls are in the picture and what the picture is telling us. This will also be your homework because it will take more than a day to go through the book.

Assessment Task:

1. Check on assignment completion.
2. Allow all students to complete their analyses.
3. Use inductive questions to respond to student inquiries and reactions, e.g.:

> "How many females were in these pictures?"
> "What was going on in the pictures?"
> "What were the features saying?"

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Lois A. Wiley, Teacher

SCHOOL: Jefferson Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 7

TOPIC: Careers

Objective(s):

To develop awareness of occupational stereotypes.

Procedure:

The teacher will list, on the board, professions where proficiency in math are needed. Students will brainstorm professions.

Given pencil, paper, and crayon, the students will construct pictures showing a person involved in one of the professions listed on the board.

Doctor
Chemist
Banker
Nurse
Store Owner
Store Clerk
Pilot
Mathematician
Scientist
Astronaut
Engineer
Architect
Librarian
Accountant
Pharmicist
Insurance Agent
Bricklayer
Carpenter

Only two pictures showed women at work - Nurse drawn by a girl and an airplane pilot drawn by a boy.

Class discussed the fact that women are involved in all the professions listed and are just as, and sometimes more, capable than men.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Marian Brown, Teacher

SCHOOL: Browne Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 7

TOPIC: Women's Careers in Science

MATERIALS: Encyclopedia and other research books

Objective(s):

To make students aware of the contributions of women in science and to explore science careers open to all students.

Procedure:

Students were first told to do research on women in science careers using the encyclopedia and other books. After conducting their research, a panel of five students reported on five female scientists and their contributions to society. The scientists researched included Marie Curie.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Antonia Gordon, Teacher

SCHOOL: MacFarland Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 8 - American History Class

TOPIC: Women's History

MATERIALS: "Women Daredevils of World War II," *Search Magazine*, April 3, 1980, or other similar materials

Objective(s):

Students will investigate the role of women pilots in World War II.

Procedure:

Teacher will lead class into discussion of what special talents or abilities are needed to fly a plane. List them on board.

Students will copy list from board and put an M for male, an F for female, or B for both next to the talents/abilities listed.

Tally the results on the board. Did they expect these results? Did the boys tend to mark most of the talents/abilities with M? How did the girls' votes compare?

Give students copies of article "Women Daredevils of World War II," *Search Magazine*, April 3, 1980 to be read.

Assessment Task:

Students will list and then discuss the prejudices and negative attitudes encountered by the Women's Air Force Service Pilots.

Were any of these prejudices and negative attitudes previously expressed by students in thier discussion of special talents and abilities needed to fly a plane? Discuss these.

Students will write [illegible] short essay on the contributions made by women pilots in World War II.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Constance R. Barber, Teacher

SCHOOL: Hart Junior High School

GRADE LEVEL OR TARGET GROUP: Grades 8 - 9

TOPIC: District of Columbia History or Library Studies

MATERIALS: Biographies of the women for whom various D.C. schools were named

Objective(s):

Given a list of nine women for whom D.C. schools were named, the student will be able to identify one important contribution for each woman and one example of her overcoming prejudice because of her sex.

Procedure:

1. Look up biographies of each individual.
2. Write reports on all of the women.

Mary Church Terrell
Harriet Tubman
Lucretia Mott
Nannie Burroughs
Lucy Slowe
Phillis Wheatley
Myrtilla Miner
Mary McLeod Bethune
Margaret Murray Washington

Assessment Task:

1. Role playing of a scene involving sex discrimination
2. Matching name of person with incident from her life
3. True-false test

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Antonia Gordon, Teacher

SCHOOL: MacFarland Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 9-Civics/Street Law Class

TOPIC: Civics/Careers

MATERIALS: Copies of Civil Rights Act of 1964 and Equal Pay Act of 1963

Objective(s):

Students will be able to explain the Civil Rights Act of 1964 (Title VII) and the Equal Pay Act of 1963.

Procedure:

1. Students will read and discuss, with teacher, the Civil Rights Act of 1964 and the Equal Pay Act of 1963. (See next page).
2. Students will separate into four groups. Each group will review a case and decide whether these laws have been violated (15-20 minutes).
3. Each group will present its case to the class, explaining its decision.

Assessment Task:

Students will write a paragraph summarizing the acts using the cases presented to illustrate various ramifications of the law.

CIVIL RIGHTS ACT OF 1964/EQUAL PAY ACT

STUDENT WORK SHEET

The Civil Rights Act of 1964 (Title VII) declared the following: Any employer of fifteen or more employees cannot

1. refuse to hire or discharge any individual or otherwise discriminate against any such person with respect to compensation, terms, conditions or privileges of his or her employment because of such person's race, color, religion, sex or national origin; or

2. limit, segregate, or classify her or his employees in any way which would tend to deprive any individual of equal employment opportunity; or

3. advertise in such a way as to reflect the aforementioned discrimination.

This Act does, however, allow employment discrimination based on religion, sex, or national origin if it is a "bona fide (good faith) occupational qualification" for employment. This means that if an employer refuses to hire a person, the refusal must be based on a good reason that can be defended,directly related to the business. In addition, Congress has passed the Equal Pay Act of 1963, which requires equal pay for men and women in similar jobs within the same company.

Case 1. Mildred Morton applies for a job as a truck driver with Johnson Brothers Furniture Company. She is refused on the basis of being a woman. The company claims that a woman could not handle the necessary loading and maneuvering of the trucks.

Case 2. Mr. Fagen was a service representative for the National Cash Register Company. The Company issued employee regulations which said that "hair will be neatly trimmed and combed. The length of the hair will taper down the back of the head and terminate above the collar. This eliminates the appearance of long hair." Mr. Fagen was warned of this policy but refused to obey it. Mr. Fagen took the company to court and asked that they be ordered not to enforce this rule as it discriminated against him because of his sex (women did not have to follow it) and violated his rights to privacy.

The Company argued that it was a bona fide occupational qualification "and that in the past the company had received complaints from customers because certain employees had long hair. Part of Mr. Fagen's job was to visit customers.

Case 3. Wilshed Corporation sells tools to other companies which use tools in the manufacture of products. Wilshed Corporation has 150 salespeople throughout the country--none of whom are women. They claim that the men who buy can relate better to men selling tools.

Case 4. A glass-making company paid a higher wage to an all-male night shift than it paid to women working on all-women day shift who performed the same work.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Pattie W. Spady

SCHOOL: Jefferson Junior High School

GRADE LEVEL OR TARGET GROUP: Grades 7 - 9

TOPIC: Science

MATERIALS: Books, articles, pictures, etc.

Objective(s):

The student will be able to recognize discrimination against females in the occupation of Oceanography.

Procedure:

1. Using the technique of respectful listening, demonstrate for the class how a female college student is talked out of pursuing a degree in Oceanography by her male counselor.

2. Have the students work in groups. Distribute to each group different kinds of written materials (books, magazine articles, pictures, etc.) showing people working in Oceanography. Have each group discuss the biased points in each piece of material that could persuade a female student not to consider a career in this field.

Assessment Task(s):

1. What are some reasons female students may not choose a career in Oceanography?

2. How can written materials on a subject discourage a person from entering an occupation such as Oceanography?

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Ottis Watkins, Teacher

SCHOOL: Jefferson Junior High School

GRADE LEVEL OR TARGET GROUP: Grade 9

TOPIC: Mathematics

Objective(s):

Given several scientific and related occupations, the student will be able to conduct a limited survey of the numbers of females against males working in these fields.

Procedure:

Occupations: Mining, Engineering, Metallurgy, Foundry and Forestry.

Instructional Tasks:

1. Find the employment outlook for females.
2. Locate institutions that accept female students.
3. Develop, along with group members, a list of females you interviewed in any of these fields.
4. Visit local institutions and businesses that offer educational or employment opportunities related to these fields.

Assessment Tasks:

1. Research and report what you found, and compare the number of females against female employment.
2. Find and identify the different kinds of jobs available in this area.
3. Explain the working conditions.
4. List the advantages/disadvantages for a female working in these fields.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979 - 1980

DEVELOPED BY: Mrs. Joanna T. Gibson, Teacher

GRADE LEVEL OR TARGET GROUP: Grade 9 - English Class

TOPIC: Biased Materials

MATERIALS: Exploring Literature, Greek Myths and Legends, Prose and Poetry

Objective(s):

To make ninth grade students aware of unfairness of most textbooks.
To make students aware in general of the term "sex equity."

Procedure:

Analyze textbooks for the numbers of articles etc , about women and men. A variety of types was studied: short stories, myths, poems, and biographies.

In every case, there are few women, and those that were there are portrayed as vain, unreasonalbe, and often stupid. In the myths especially, the goddesses are portrayed quite unfairly.

Students should read the stories and with the equity concept in mind go on to see the actual unfairness of the line up.

Assessment Task:

This stimulated the discussion of sex equity by the students and made them aware of the existence of such unfairness.

They also recalled articles in the paper about the sexes such as the firefighter in the state who eventually gave up her job.

SEX EQUITY LESSON PLAN

EDUCATIONAL EQUITY INSTITUTE 1979-1980

DEVELOPED BY: Barbara P. Dudley, Teacher

SCHOOL: John F. Cook School

GRADE LEVEL OR TARGET GROUP: K - 9

TOPIC: Social Studies, Careers

MATERIALS: Paper, pencils, etc.

Objective(s):

The students will develop awareness of sex roles and the variations of these roles from culture to culture.

The students will be able to list a wide variety of occupations regardless of sex with 100% accuracy.

Procedure:

The children drew pictures of the various occupations that were discussed during the lesson.

They discussed how sex roles and jobs changed from culture to culture.

A movie was shown depicting different job opportunities for both sexes.

Follow-up: Students will bring in pictures or articles relating to different job occupations.

A BASKETBALL FOR ANTESSA

A PLAY by Diane Marie Clowe, Student
Charles Hart Junior High School
Gifted and Talented Educational Program
District of Columbia Public Schools

This play, written by a 12 year old female student in the District of Columbia Public Schools portrays changing attitudes and intergenerational differences regarding sex role stereotyping, The issue addressed here is the girls in athletics and the old adage, "Girls should wear dresses and boys play basketball."

The play is appropriate for multiple classroom and school-wide uses, including radio/P.A. system or live production, silent reading with subsequent written or oral questions, or as a stimulus for class discussion.

A BASKETBALL FOR ANTESSA

Time: contemporary; present

Place: on an estate

Cast of Characters: Antessa age 13; Cydell (her sister) 16; Antessa's father (Mr. Dawson), Antessa's mother (Mrs. Dawson), the basketball coach; Julianna (Antessa's friend); and the referee

ACT I

Scene: In her room, sitting on her bed, Antessa is trying to tell her sister Cydell why she wants to play basketball and doesn't want to wear dresses.

Antessa: Why is mother so bugged out about me wearing dresses anyway?

Cydell: You are a girl! And girls like to wear dresses and hate to play basketball.

Antessa: How do you know girls hate basketball?

Cydell: I'm in high school, dummy! (as she walk's out the door she turns around) Personally I like dresses.

Antessa: (walking to her dresser) Just because she's in high school, she thinks she knows everything.

Mrs. Dawson: (looking in the bedroom) Oh! Antessa you're just the one I'm looking for. Look what mommy bought you. (She hands Antessa a box)

Antessa: (opening the box) Dresses! Mother, you know I hate to wear dresses!

Mrs. Dawson: You are a girl and girls love to wear dresses.

Antessa: (walks towards to bed) Have you been talking to Cydell?

Mrs. Dawson: Of course I have! She's my daughter. Cydell said you want to play basketball.

Antessa: (drops the box on the bed and turns around slowly) That's right. Girls play basketball too. And I'm going to try out.

Act II

Scene: Cydell and Antessa sitting at the table eating breakfast. Cydell is asking Antessa about playing basketball.

Antessa: (drinking her juice) Well? Today is the day.

Cydell: (laughing) You're really going to try out, aren't you?

Antessa: Yeah! And what's the big deal?

Cydell: You'll find out when mom and dad discover what you're doing.

Antessa: Mom knows, but dad.........

Mr. Dawson: (entering the kitchen) But dad what?

Antessa: Oh! Good morning, daddy, I was just telling Cydell about my new dresses (pinching Cydell under the table).

Mr. Dawson: I thought you didn't like dresses.

Cydell: She does! She does!

Mr. Dawson: See you two tonight.

Cydell and Antessa: Goodbye, Daddy.

Mrs. Dawson: (yawning) Good morning, girls.

Cydell: (smiling) Antessa's going to try out for basketball.

Act II (con't)

Mrs. Dawson: (turning around quickly) What will they think of me at the Missionary Bridge Club?

Antessa: (stands up from table) Is that all you think about? That dumb club?!

Cydell: Well, it's about time for me to leave (picking up her books).

Antessa: (looking at Mrs. Dawson) Me too!

ACT III

Scene: Antessa and Cydell are walking to the bus stop. Cydell sees some of her friends and leaves Antessa.

Cydell: I'll see you later. Okay?

Antessa: Yeah. Yeah!

Antessa: (running toward to the school) Hey, Julianna! Are you going to try out?

Julianna: Sure, I wouldn't lie to you would I?

Antessa: One never knows, do they?

ACT IV

Scene: Antessa and Julianna sitting in the gym waiting for their names to be called.

Coach: The first girl to try out is .... let me see, Betty J. Ford.

Antessa: (whispering to Julianna) Do you really think she'll make it?

Julianna: Sure! She's so tall she doesn't have to jump.

Antessa: Listen to everyone gigling, Julianna!

Coach: Will you please be quiet?

(The gym got quiet)

Coach: The next girl or young lady will be Antessa Dawson.

Antessa: Okay! (She picked up the ball and ran down the court and made it.)

Coach: That will be all for today.

ACT V

Scene: Two weeks later all the girls that made it are in the gym. Antessa and Julianna are looking for their names.

Antessa: (grabbing Julianna) We made it! We made it!

Julianna: Oh boy! Wait till my mother finds out. She'll be so happy for me. What about your mother Antessa?

Antessa: The same old song: Girls should wear dresses and boys play basketball.

Julianna: Is it that tough?

Antessa: It's worse that that.

Julianna: What do you mean?

Antessa: I'm going to tell her I made it.

Julianna: But you know what she'll say; and we have a game tomorrow night!

Antessa: I know. I know.

Antessa: (walking in the front door) Hi mom.

Mrs. Dawson: Hello! Did you have a nice day?

Antessa: It was okay.

Mrs. Dawson: Antessa, can you please wear a dress tomorrow night for the dinner party?

ACT V (con't)

Antessa: Tomorrow night! I have something to do!

Mrs. Dawson: Can you cancel it? This is very important to me.

Antessa: I have to think anout it.

ACT VI

Scene: Antessa looking in her closet. She pulls out a blue dress with a white lining. Then she looks at the basketball suit on the bed and starts crying. She sits in the chair.

Antessa: (talking to herself) I got it! I will go to the game and stay home too.

Antessa: Cydell! Come here quick.

Cydell: What do you want? I was getting dressed.

Antessa: I need your help. I made the basketball team and we have a game at 7:30. When 7:30 comes, think of something.

Cydell: Alright. Alright.

Antessa: Thanks alot.

ACT VII

Scene: The whole family is sitting at the table with some ladies from the MBC.

Cydell: (watching the clock it's 7:30) Oh yeah! Antessa, Julianna called and said to come over her house. She's at home by herself.

Antessa: Thanks. Mom, Dad, may I be excused?

Mrs. Dawson: Yes, you may.

Act VIII

Scene: All the girls in they gym are in the dressing room. They hear the coach blow the whistle. Mr. Brown calls the role.

Mr. Brown: Where is my star player?

Julianna: Who? Antessa?

Mr. Brown: (wiping his forehead) Yes!

Julianna: She said she'll be here before the game ends.

Mr. Brown: This is the end of the game!

ACT IX

Scene: Cydell is helping Antessa get ready.

Antessa: Thanks, Cydell, you're a doll.

Cydell: (smiling) I know.

Antessa: Are you coming to the game, Cydell.

Cydell: Well, I ......

Antessa: Please come! Please!

Cydell: All right! I'll come.

Antessa: Like I said, you're a doll.

ACT X

Scene: Antessa and Cydell are walking down the stairs.

Cydell: Goodbye!

Antessa: Goodbye!

Mr. and Mrs Dawson: Goodbye.

Mrs. Dawson: Cydell come here a minute.

Cydell: Yes, mother?

Mrs. Dawson: I know where you two are going. But if that is what she wants, that's what she gets.

Cydell: Thanks, mom. (she kisses her mother) (as she leaves out the door) Please come.

Mrs. Dawson: I'll try.

ACT XI

Scene: At the game, the coach is worried sick. The score is Home-14, and Visitor-16. Antessa runs up to the coach, the rest of the team sees her. They all yell.

Coach: Antessa, you can't play.

Antessa: Why not? Because I have on a dress?

Antessa: Look! (lifting up her dress) I'll explain later.

Coach: But, Antessa........

Antessa: Don't worry, I'll explain later.

ACT XII

Scene: The referee sees Antessa and calls time out.

Mr. Brown: (talking to the girls) Okay, the score is 14 to 16. We need 2 points to tie it and 4 to win. It's 3 minutes left in the game.

Julianna: What will it be 2 or 4 points?

The team: (all together) We're going to win.

ACT XIII

Scene: The referee calls both teams to the floor. He tells them how much time they have left and the score.

The Coach: Go! Julianna, go! (Julianna runs up to the basket and makes it)

Antessa: Throw me the ball Julianna! Throw me the ball!

Julianna: Alright! Alright! (she throws the ball to Antessa)

Antessa: (throwing the ball into the basket) I made it! We won! We won!

ACT XIV

Scene: Antessa is looking around to see if Cydell showed up. Then she turns around and see her mother and Cydell.

Antessa: (running towards the bleachers) You came! You came!

Mother: You were just great.

Antessa: But what about the ladies at the MBC club?

Mother: I told them if they didn' like what my child is doing then they could take their club and put it where the sun doesn't shine.

Cydell: Antessa you were just great! But why didn't you take off your dress?

Antessa: (lifting up her dress) I did not have time so I put on my basketball suit underneath.

Mother: Antessa I love you, and from now on you can play basketball all you want.

Antessa: Mom, I love you too.

Mother: Come on, let's go home.

Antessa: (hugging her mother) Yeah. Let's.

LOCATION OF SEX EQUITY RESOURCE CORE COLLECTIONS

1. **Department of Library Science**

Location: Jefferson Administrative Annex
801 7th Street, SW
Washington, D.C. 20024

Telephone Number: 724-4951

Hours: 8 a.m. - 4 p.m. Monday through Friday

Contact Person: Olive C. De Bruler, Supervising Director

2. **Title IX/Equal Employment Opportunity Office**

Location: Presidential Building
415 12th Street, NW
Room 1010
Washington, D.C. 20004

Telephone: (202) 724-4218

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Contact Person: Wanda Whitlow Hinshaw, Title IX Coordinator

LOCATION OF SEX EQUITY RESOURCE MINI-COLLECTIONS

(PARTICIPATING SCHOOLS AND EDUCATORS IN EDUCATIONAL
EQUITY INSTITUTE, THE AMERICAN UNIVERSITY, 1979 - 80)

REGION I

Regional Schools	Grade Level/Subject	Participant
Terrell Elementary Wheeler & Savannah Sts, S.E. Washington, D.C. 20032 (202) 767-7307 Sally E. Tancil, Principal	1st Math K-4 2nd	Nae F. McKinney** Vera M. Smith** Juanita B. Thompson** Phyllis C. Toliver**
Patterson Elementary S. Capitol Terrace and Darrington Sts., S.W. Washington, D.C. 20032 (202) 767-7119 Arthur C. Shipp, Principal	Counselor Librarian Science	Vinetta M. Baxter Connie Lawson Carol Weekes
Hart Junior High 601 Mississippi Avenue, S.E. Washington, D.C. 20032 (202) 767-7077 Carl T. Contee, Principal	English Librarian English English Counselor Math Social Studies	Ludi A. Arnold* Constance R. Barber* Joanna T. Cibson** Irma L. Hailstalk Lydia D. Lampley* Felicia R. Long* Joyce L. Thompson*
Green Elementary 15th & Mississippi Avenue, S.E. Washington, D.C. 20032 (202) 767-7098 Vandy L. Jamison, Principal	4th	Gwendolyn Davis
Van Ness Elementary 5th & M Streets, S.E. Washington, D.C. 20003 (202) 724-4698 James A. Harris, Principal	Physical Education 1st Librarian	Elizabeth Simms** Claretha F. Smith** Quennell McClain**

** Willing to be called on to provide technical assistance.
* Willing to be called on to provide limited technical assistance.

Participating Schools and Educators in the Educational Equity Institute

REGION II

Regional Schools	Grade Level/Subject	Participant
Syphax Elementary	5th, 6th	Roy L. Alston**
Half & N Streets, S.W.	Math 1-3	Geraldine H. Carter
Washington, D.C. 20024	5th	Ione G. Dixon*
(202) 724-4878	Librarian	Florine Russ
	2nd	Sylvia S. Shaw**
Mary J. Williams, Principal	Reading 1-3	Barbara H. Wells**
Mann Elementary	3rd, 4th	Lauretta C. Jackson**
45th & Newark Streets, N.W.	K-4	Paula G. Leftwich**
Washington, D.C. 20016	Counselor	Alicemarie Pitts**
(202) 282-0126		
Lillian B. Dezon, Principal		
Jefferson Junior High	Reading	Mary H. Gill**
8th & H Streets, S.W.	Special Education	Lavonne Hinton
Washington, D.C. 20024	Math	Deborah P. Jackson*
(202) 724-4881	Science	Pattie W. Spady*
	Math	Ottis C. Watkins**
James Campbell, Principal	Math	Lois C. Wiley **

REGION III

Regional Schools	Grade Level/Subject	Participant
Fletcher-Johnson Education Center	Librarian	Ellen Amey
C Street & Benning Road, S.E.	Math	Antonia Tolson
Washington, D.C. 20019	Counselor	Janie Wanzer
(202) 724-4920	Science	David Winfield
George Rutherford, Principal		
Young Elementary	Librarian	Phyllis T. Glaude
24th & Benning Road, N.E.	1-3	Marie I. Johnson*
Washington, D.C. 20002	2nd	Deborah A. Lyles
(202) 724-4569	4th	Rosella H. Pierce**
	Counselor	Doris S. Thompson
Mattie Spotwood, Principal		
Browne Junior High	Science	Emma Inez Bonner**
24th & Benning Road, N.E.	English	Catherine S. Booker
Washington, D.C. 20002	Science	Marian H. Brown
(202) 724-4547		
Marguerite Pettigrew, Principal		

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REGION IV

Regional Schools	Grade Level/Subject	Participant
John F. Cook Elementary 30 P Street, N.W. Washington, D.C. 20001 (202) 673-7221 Charles E. Elliott, Principal	Special Education 6th	Barbara P. Dudley** Evelyn M. Holmes**
Ludlow-Taylor Elementary 6th & G Streets, N.W. Washington, D.C. 20002 (202) 724-4752 Frances Plummer, Acting Principal	Counselor	Dolleretta D. Smith
Hine Junior High 7th & C Streets, S.E. Washington, D.C. 20003 (202) 724-4772 Patrick M. Jamison, Acting Principal	English Counselor School Nurse Reading/Math Science	Coleman E. Allen Norma Cole* Pattie Howard** Carol D. Kyle Raye Law**

REGION V

Regional Schools	Grade Level/Subject	Participant
Bruce-Monroe Elementary 3012 Georgia Avenue, N.W. Washington, D.C. 20010 (202) 576-6215 Alma Felder, Principal	1st 5th Kindergarten 4th	Joyce O. Brown* Oscar L. Hinton** Lesley A. Oliver** Evelyn S. Roberson**
Barnard Elementary 5th & Decatur Streets, N.W. Washington, D.C. 20011 (202) 576-6231 Anita Hammond, Principal	1st Counselor	Gladys Harris* Rosalie Harrison*
McFarland Junior High Iowa Avenue & Webster Street, N.W. Washington, D.C. 20011 (202) 576-6207 William Gray, Principal	Social Studies Counselor	Antonia Gordon** Charles Whitted*

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REGION VI

Regional Schools	Grade Level/Subject	Participant
Sharpe Health Center 4300 13th Street, N.W. Washington, D.C. 20011 (202) 576-6161 Marian Siler, Principal	Special Education " " " "	Katherine Leidecker** LaGrande Lewis** Mary E. Maynard**
Brookland Elementary Michigan Avenue & Randolph Street, N.E. Washington, D.C. 20017 (202) 576-6082 Shirley Hammond, Principal	2, 3 Math, Science 5th, 6th	Lillian S. Harris** James L. Thompson**
Shepherd Elementary 14th & Kalmia Road, N.W. Washington, D.C. 20012 (202) 576-6140 Edith Smith, Principal	K-6	Elaine Pryor
Paul Junior High 8th & Oglethorpe Streets, N.W. Washington, D.C. 20011 (202) 576-6190 Thomas Collier, Principal	Special Education Science Social Studies	Kay Clark Nancy S. Knight Constance M. Moore

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